4CH Standalone DVR
SEC-DVR304-2

User Manual

Default Account & Password for SEC-DVR304-2

- **User Account: [aa]**
- **Password: [11]**

2010-08-05

【Safety Precautions】

⚠ ***Do Not touch live electrical parts.***

Electric shock can be avoided. Follow the recommended practices listed below. Faulty installation, improper grounding, and incorrect operation and maintenance of electrical equipment are always sources of danger.

⚠ ***Do Not try to install equipment outdoor, when the wind and rain is strong.***

⚠ ***Do Not install or remove equipment outdoor ,when the weather is raining.***

⚠ ***Do Not try to install or operate any equipment , when the thunderstorm happened.***

⚠ ***Always Ground all electrical equipment and the work platform.***

Prevent accidental electrical shocks. Connect power source, control cabinets, and work platform to an approved electrical ground.

⚠ ***Always use the correct cable size.***

Sustained overloading will cause cable failure and result in possible electrical shock or fire hazard. Work cable should be the same rating as the torch cable or factory .

⚠ ***Always keep cables and connectors in good condition.***

Improper or worn electrical connections can cause short circuits and can increase the chance of an electrical shock. Do not use worn, damaged, or bare cables.

⚠ ***Always avoid open-circuit voltage.***

The added voltages increase the severity of the shock hazard.

⚠ ***Always wear insulated gloves while you adjust equipments.***

Power should be shut off and insulated gloves should be worn when making any equipment adjustment to assure shock protection.

⚠ ***Always wear protective clothing such as long sleeve shorts while you are installing or removing equipments.***

⚠ ***Always Wear high, snug fitting shoes.***

⚠ ***Always Wear clean clothes without grease or oil.***

Do not wear clothing that has been stained with oil and grease. It may burn if ignited by the heat of the arc.

⚠ ***Protect neighboring workers from exposure to arc radiation.***

⚠ ***Always Wear long trousers or jeans while you are installing or removing equipments.***

⚠ ***Always wear safety helmet or hard head and safety shoes before work.***

⚠ ***Always keep the equipments in dry places.***

⚠ ***Always wear safety harnesses/belt while you work in high places.***

⚠ ***Always wear dry clothing and avoid moisture and water.***

⚠ ***Always wear Public Safety Vest , while you work at night.***

⚠ ***Make sure all electrical connections are tight, clean, and dry.***

⚠ ***Make sure that you are well insulated and eliminate the electric static charge.***

⚠ ***Always wear dry gloves, rubber-soled shoes, or stand on a dry board or platform.***

⚠ ***Always Follow recognized safety standards.***

⚠ ***Always wear correct eye, ear, and body protection.***

⚠ ***Always have second person on-site, while you work in the darkness places, poor ventilation places and high places.***

⚠ ***Make sure that you are well protected against arc flashes, mechanical injury, or other mishaps.***

⚠ ***Make sure that the polarity of wire is correct, before installing equipments.***

⚠ ***Always handle equipment with care.***

⚠ ***Do Not block the ventilation of equipment.***

⚠ ***Do Not put the magnetic parts around the Equipment.***

⚠ ***Do Not put the objects on top of equipment.***

Warning

This is the symbol for indicating any potential hazard, risk or condition requiring special attention. The user need to refer to the important operating and maintenance or servicing instructions.

Caution

The lighting flash with an arrow head symbol, in an equilateral triangle, is intended to alert the user. There is dangerous "voltage" presence near by the product's enclosure which may be risk of person.

information

This is the symbol for notice you that more information in the other pages or additional information.

Environmental-friendly

This is the symbol for recycling , in order to create the green planet.

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- ANY CLAIM OR ACTION FOR DAMAGES, BROUGHT BY ANY PERSON OR ORGANIZATION BEING A PHOTOGENIC SUBJECT, DUE TO VIOLATION OF PRIVACY WITH THE RESULT OF THAT SURVEILLANCE-CAMERA'S PICTURE, INCLUDING SAVED DATA, FOR SOME REASON, BECOMES PUBLIC OR IS USED FOR THE PURPOSE OTHER THAN SURVEILLANCE.

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【Chapter 1. Overview】

1. Introduction

The H.264 digital video/audio recorders are designed for use within a surveillance system with limited space, and are a combination of a hard disc recorder, a video multiplexer, and a web server.

To achieve the highest inter-connectivity and inter-operability, this series of digital video/audio recorders are all based on industry-leading front-end to back-end surveillance infrastructure. With state-of-the-art system architecture, powerful compression/decompression engine, and intelligent recording algorithms, hexaplex operation can be easily achieved without sacrificing the increasing demands of functionality, performance, reliability, and availability in the surveillance industry.

1.1. Features

- H.264 Compression for better video quality & smaller record size
- 4-CH H.264 DVR with Hexaplex operation – record, live view, playback, backup, control, & remote access
- Support DDNS.
- Live view support 3-D de-interlace & de-noise
- Up to D1 resolution
- Double recording rate (Full-D1: 60 / 50 IPS, Half-D1: 120 / 100 IPS, CIF: 240 / 200 IPS)
- Mouse Driven GUI Interface
- Two way Audio communication capabilities
- Audio Broadcasting facilitates administrator easy to manage multiple DVR through one IE
- Simple USB Backup
- External USB DVD-RW & USB HDD supported (Backup)
- Digital Zoom 2X / 4X
- Built-in VGA
- Supported Multi-language
- Smart search: provides smart search of “Mark specific Area” for quicker search
- Digital watermark to Prevent film to be altered.
- Playback search by time or event (alarm, motion, video loss)
- 1 SATA HDD supported > 2TB.
- USB2.0 * 1 for video/audio backup to versatile USB2.0 storage devices , USB1.1 * 1 for mouse operation
- Multi-Operation interface: remote controller, touch board, and mouse operation

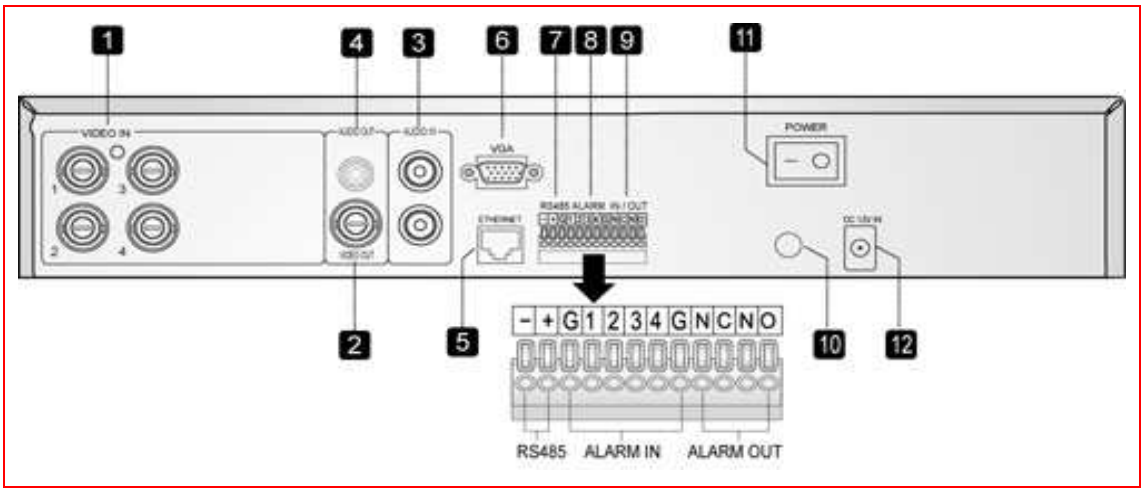
- RS-485 for PTZ, keyboard control
- Immediately remote trigger I/O devices via IE remote software & Mobile Phone
- Remote view via Mobile Phone/IE/Firefox
- OCX SDK available for the integration with different applications
- Playback recorded video via IE / Firefox software (Max. 64chs.)
- Free video player for backup video
- Support smart phone no need install application.

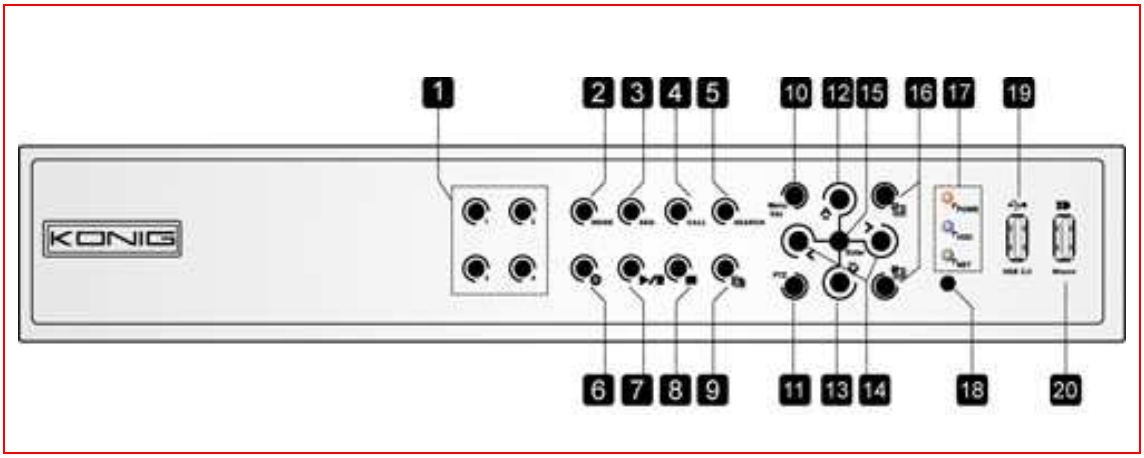
For more information , please refer to Appendix.

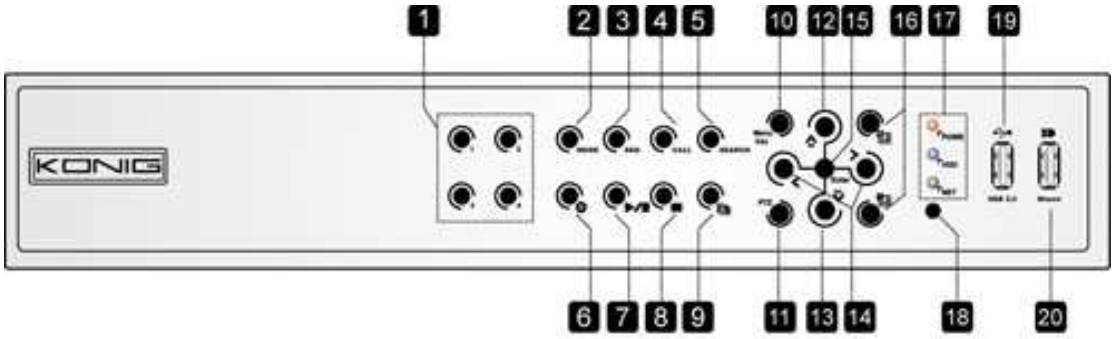
1.2 Packing list

Packing list			
SEC-DVR304-2	Remote Controller	AAA Battery	Screws
CD	Quick Guide	Power Adapter	Power Cord

1.3 Components

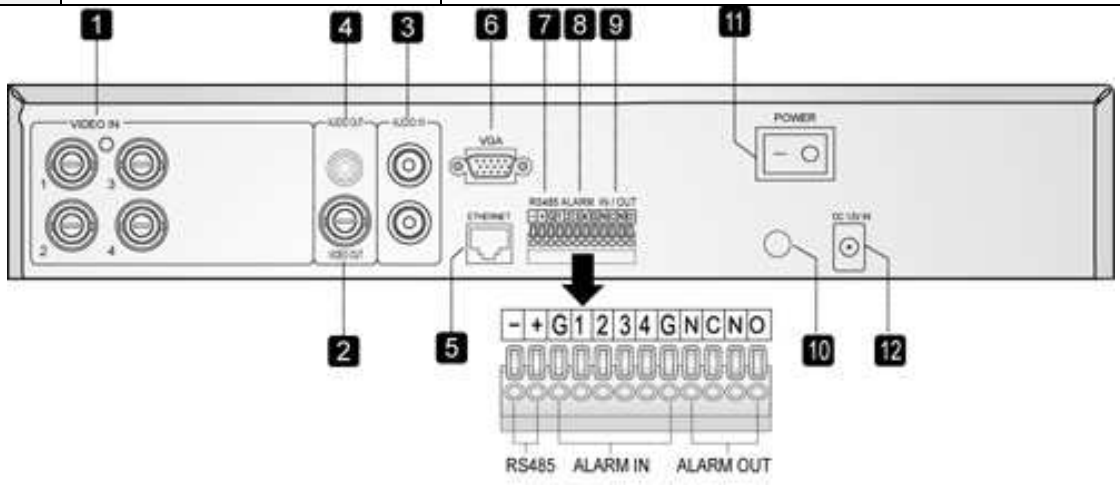




Area A (Front view)			
No.	**Symbol**	**Button**	**Functions**
1	1-4	Alpha-numeric	For selecting Channels. Also, it can be used for typing text and number, when use mobile functions.
2	Mode	MODE	For toggling between live mode and playback mode in main screen display. Also, as the function of “backward/slow backwrad”,when you used the playback mode.
3	SEQ	SEQ	For changing channels.
4	CALL	CALL	For switching to or return from full screen display of the focus camera in main screen display.
5	SEARCH	SEARCH	For displaying the search menu.
6	REC	RECORD	For manual recording. To stop manual recording, press button once again.
7	▶/II	Play/Pause	For playing the recorded images, or pausing the playback.
8	■	Stop	For stopping the playback.
9		Copy	For copying the playback images to the storage device connected to the USB port. Press this button once to stop copying.
10	Menu/Esc	MENU / ESC	For displaying the main menu or exit to previous page.
			
11	Page	Page	In main screen display, press this button to enter/exit PTZ control if the focus camera is a PTZ camera.
12	▲/BS	Up/BS	As the function of moving up or focus window in normal operation. *In PTZ control, it used for tilting up the

			camera. **In text editing mode, the function as “**backspace” key.
13	▼/DEL	Down/DEL	As the function of moving down or focus window in normal operation. *In PTZ control, it used for tilting up the camera. **In text editing mode, the function as “del” key. ***In playback mode, it used for single step.
14	◄,►	Left/Right	In PTZ control, it is used for panning the camera. In playback mode, the function as fast backward/forward. In the other screens, it is used for cursor or focus window.
15	ENTER	ENTER	This button is used as “enter” key in normal operation. *In PTZ control, this button is used to start/stop the selected PTZ control mode.
16	+ / -	Split Windows	For next/previous split-window display.
17 18	LEDs	LED indicator/	Main power, HDD and Network access indicators.
		IR sensor	For receiving signal from I/R remote controller
19		U.S.B port	For USB 2.0 compatible storage device
20		U.S.B port	For USB MOUSE connection.

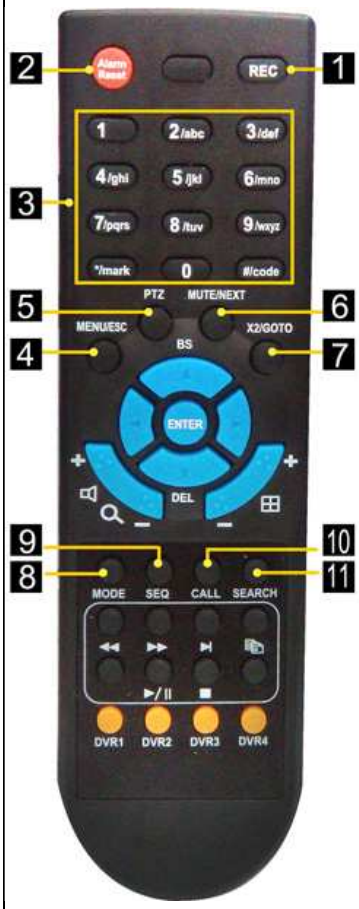
For detailed information, please refer to appendix.

Area B (Rear view)		
No.	Connector	Functions
1	Video Input(camera) (1-4ch)	For Camera video input(BNC connector/internal 75Ω termination).
2	Video output(Main out)	For video output(BNC connector)
3	Audio input	For audio input(RCA connector)
4	Audio output (AUDIO)	For audio output(RCA connector)
5	Ethernet socket	For internet connection
6	VGA	For VGA output (optional D-SUB 15-pin female connector). *There won't be video signal for MAIN OUT BNC connector if VGA is connected.* If you would like to switch the connector from VGA into MAIN OUT or from MAINOUT into VGA , you have to restart the DVR, after you finished the connection.
		
7	RS-485	For RS-485 compatible PTZ camera(s) or keyboard. **For more information , please refer to installation and removal(RS-485 setting).**
8	Alarm Input (ALARM IN 1-4)	For Connecting to external devices such as sensors or door switches.
9	Alarm Output (ALARM OUT NC/NO)	For connecting Alarm. (Normally Closed (NC) (left), for alarm output) (Normally Open (NO) (right) , for alarm output) ***NC and NO only have 4 ports, Make sure that it is***

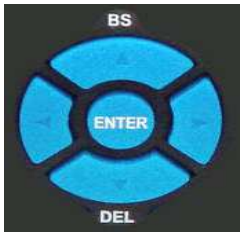
		in right position, before connection. ***Please note that only one of the NC or NO connectors can be connected .***
10	IR extension port(IR optional)	For connection IR receiver(Optional)
11	Main Power switch(DC +12V)	For DC 12V POWER SWITCH .
12	Power cord socket(DC +12V)	For DC12V POWER INPUT.

For more information , please refer to appendix.

Remote Controller



No	Symbol	Functions
1	REC	Press to start the recording.
2	Alarm Reset	Press to restore the alarm status to default.
3	Numeric/ alpha button (1-9, 0, *, #)	For camera selection ,and also it can be used for entering text and numbers. The symol "#' is also used for page down in multi-split-window displays.
4	MENU/ESC	For displaying the OSD menu and exit.
5	PTZ	Click to access the PTZ control when there is a PTZ camera supported.
6	Mute/Next	Audio mute and the **"Next"** is used for choosing next text when you typing the text in Text input.
7	X2/ GOTO	*Zoom in/Zoom out(Digital Zoom (X2/X4)) *Click to view the image taken by PTZ camera at its preset location.
8	Mode	Press to switch between live and playback mode.
9	SEQ	For changing channels.
10	Call	To call monitor and for video only(**For switching to or return from full screen display of the focus camera in main screen display).**
11	Search	To search the record video. There are five types of search modes: search by time, search by event, smart search,

			search archived files.
	12	Enter	For confirming the options or goto certain pages.
		▲/BS:	Click to move up or backspace for text/numeric entry. ***BS: BACKSPACE**
		◄ : ►	LEFT/RIGHT BUTTON.
		▼/DEL	Click to move down or delete text for text/numeric entry.
	13	🔊+/🔊-/🔍	(Vol/Zoom) +/- Buttons. *In PTZ control, press these buttons to zoom in/out the camera.
	14	⊞/⊞	To switch between different screen layouts.
Playback			
 	15	◀◀	Fast backward 2X,4X
		▶/‖	Click to play or pause the playback.
		▶▶	Fast Forward 2X,4X,8X,16X
			To copy the image to an external storage device.
		■	Stop the playback, click again will back to normal record mode.
		▶‖	Single Step the system will pause first and then jump to next step.
		MODE	Fast/slow backward 2x/4x/8x/6X
		SEQ	Fast/slow forward 2x/4x/8x/6X
DVR1 – DVR4	**16**		Reserved

♻ For environmental-friendly, please recycle the battery or use rechargeable battery.

【Chapter 2. Installation and connections】

2 Installation and connections:

2.1 Hard Disc:

Caution！

Do NOT install or remove hard drive while DVR is running!

Warning！

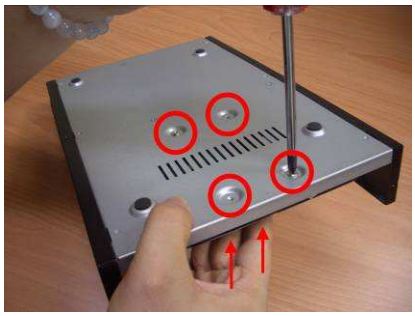
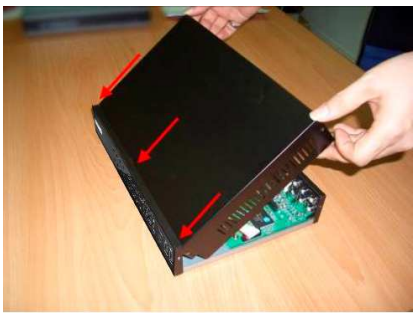
Make sure that you already turn off the power and disconnect the power cord, Before performing any services or maintenances.

Warning！

Do NOT use electric screw-driver for installing or removing Hard Disc, when you installing or removing Hard disc, or you will damage the Hard disc, Use screw driver manual only.

Make sure to install one SATA hard disc ***(Max. storage size 2TB)*** *inside the DVR*

	Step1. Loosen 4 screws on the two sides of the case (Using cross screw driver),(As shown).
	Step 2. Remove the top cover by lifting and slide back.(by hand)

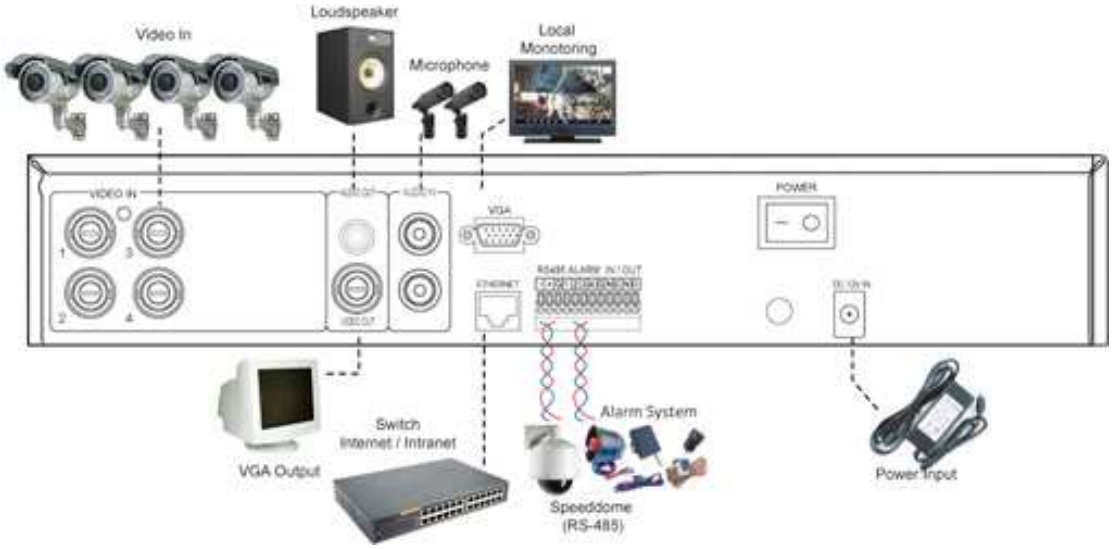
<table>
<tr><td> </td><td>Step 3.
Connect Hard Disc to the cable of SATA.</td></tr>
<tr><td>  </td><td>Step 4.
Install the hard disc in the bracket, and tighten 4 screws on the side of hard disc(hand tight).
Before install the cover, make sure that the cable all in the correct position without loosing parts or cables.</td></tr>
<tr><td>  </td><td>Step 5.
Install the top cover and tighten 4 screws on the side of top cover(hand tight).</td></tr>
<tr><td>The HDD must be formatted before use.
For more information of H.D.D format, please refer to Chapter 3.1.17.
(the system will detect the H.D.D and format automatically, in the initial starting).</td><td>Step 6.
Check the top cover to see it is in good condition, and then connect the power cord.</td></tr>
<tr><td colspan="2">Warning !
Make sure that the switch is in off position , before you connect the power cord.</td></tr>
</table>

2.2 Camera & Monitor:

Warning !

Make sure that the switch is in off position ,before you connect the power cord. and also make sure that the power is correct of adaptor.

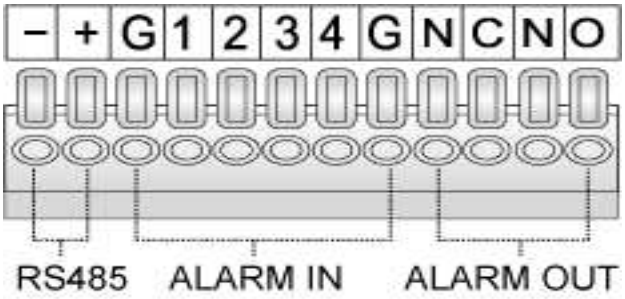
Make sure to set the NTSC/PAL Selector Switch on the main board according to the local TV system for the system to work correctly.

Rear Panel Connection


Items	Description
Camera	Connect the camera video input connectors to the video outputs from system cameras or other composite video sources via coaxial cables. The internal 75Ω termination is always ON.
Power connector	Connect power source to **DC 12V,3A**
Monitor(VGA)	Connect the main monitor output connector (BNC) to a surveillance TV monitor, or connect the **VGA output connector** to a VGA monitor. The TV/VGA monitor displays selected live or recorded cameras in any available split window format.
Monitor(Main out)	Connect the main monitor output connector (BNC) to a surveillance TV monitor.
Audio input(Optional)	Connect the audio input connector to the audio line-out from system cameras or other audio sources.
Audio	Connect the audio output connector to the audio line-in

output(Optional)	from speakers
Alarm inputs(Optional)	Connect the alarm inputs to NC and/or NO type of alarm signals.
Alarm outputs(Optional)	Connect the alarm output #1 to NC type of alarm signal, or alarm output #2 to NO type of alarm signal. Please note that only one of the NC or NO connectors can be connected only.
Ethernet(Optional)	Connect the Ethernet connector to a standard twisted-pair Ethernet cable for remote access via LAN or internet.
I/R remote controller	The user may use I/R remote controller to control the digital video/audio recorder

2.3.PTZ CAMERA:

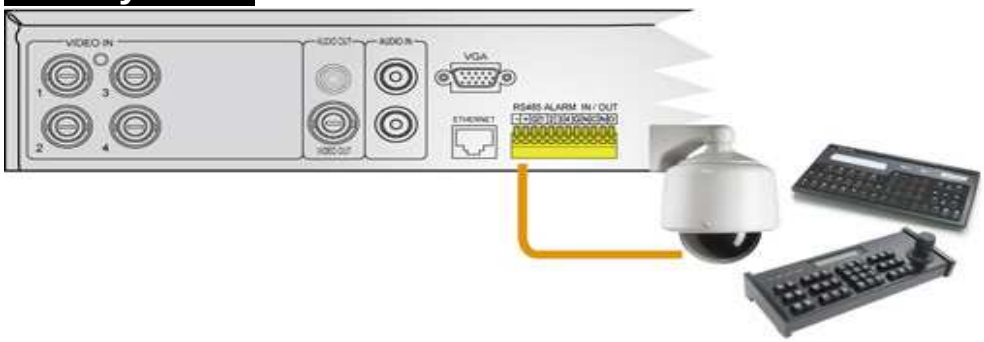


Connect the RS-485 connector to PTZ camera(s) via the appropriate cable. The system supports a variety of different PTZ cameras, including Pelco D protocol Dome, SamSung SCC-641P, Kalatel Cyber Dome, Bosch AutoDome, etc.

But different PTZ cameras can coexist in a system only if they support the same protocol.

Please make sure to set the PTZ ID of the camera(s), and setup the camera and RS-232 or RS-422/485 accordingly.

2.4. keyboard:



For Keyboard		
RS485+	● ——— ●	TxD+
RS485-	● ——— ●	TxD-
GND	● ——— ●	GND
For PTZ Device		
RS485+	● ——— ●	RxD+(Data+)
RS485-	● ——— ●	RxD-(Data-)
GND	● ——— ●	GND

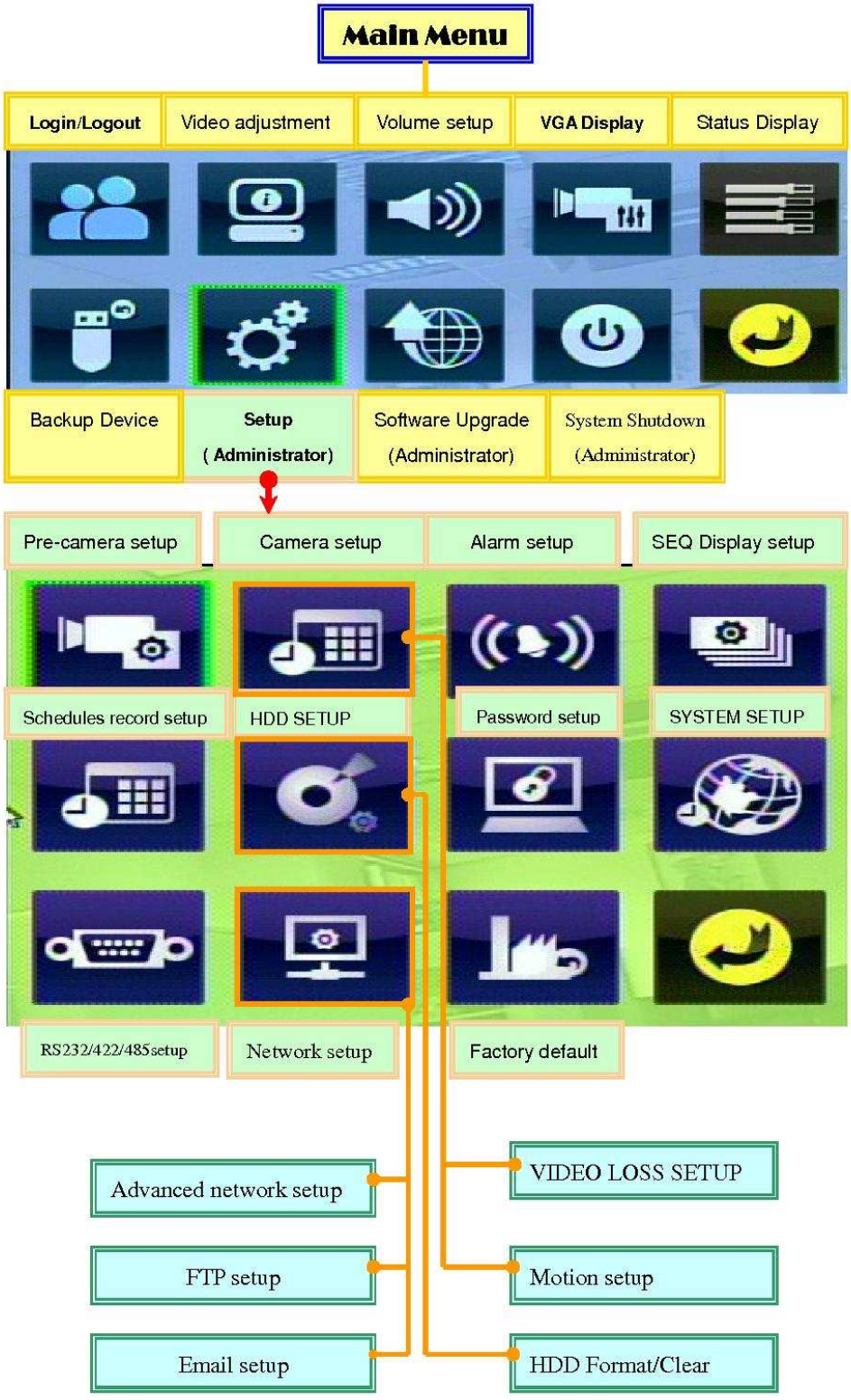
2.5.RS-485 keyboard or Terminal

Connect the RS-485 connector to a RS-485 keyboard controller or VT-100 terminal via the appropriate cables.

Please refer to the diagram above for the correct connection (as shown).

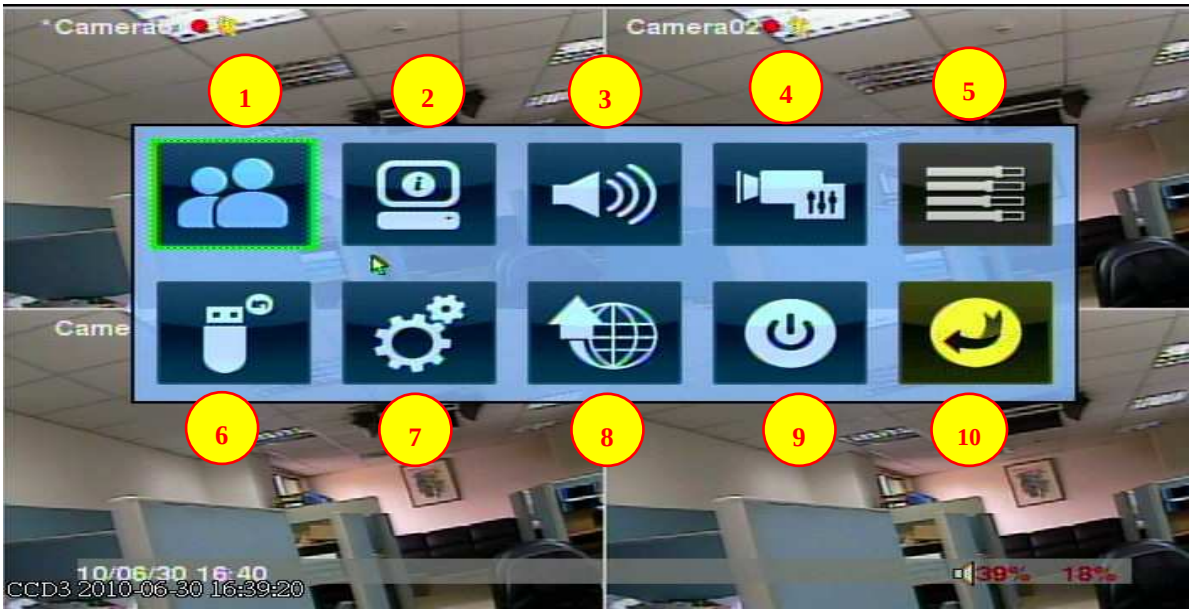
【Chapter 3.OSD SETUP】

3.1 Structure of the OSD menu.



3.1.0. OSD DISPLAY MENU(MAIN PAGE)

OSD DISPLAY MENU(MAIN PAGE)



OSD Display menu(main page)		
NO.	**Name**	**Functions**
1	**Login & logout**	For entering system
2	**Status**	For displaying the status of Alarm, camera, motion as well as the version of software.
3	**Volume**	For displaying the volume of system.
4	**Video adjustment****	For adjusting the setting of screen.
5	**VGA Display**	For adjusting the resolution of VGA.
6	**BACKUP Device**	For testing the backup devices.
7	**SETUP**	For setting the system
8	**Software upgrade**	For Software upgrade
9	**Shutdown button**	Shutdown the system
10	**ESC**	EXIT or back to previous page

For video adjustment option, there will display the basic operation menu in the bottom of screen ,as shown:

For more information, please refer to chapter **Video Adjustment**.

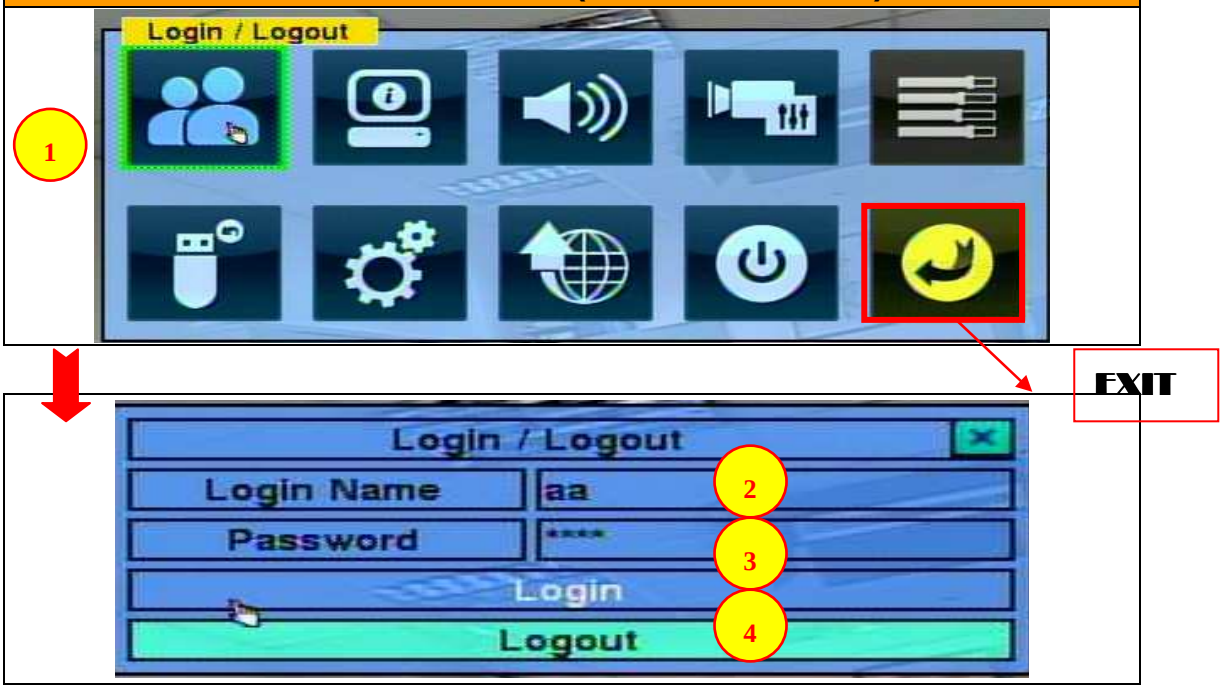
3.1.1.Log in & Log out:

Description:

There are three password levels in the system, including Administrator (highest), Supervisor, and Operator (lowest).

If the user does not login the system, he/she will be treated as “Guest” and can only view live video display.

OSD DISPLAY MENU(LOG IN& LOG OUT)



LOGIN & LOGOUT PROCEDURES			
STEPS	**MOUSE**	**Button/Remote control**	**Text input for remote control**
STEP 1	Click on **“LOGIN & LOGOUT”** icon.	Press **“Menu”** button.	1. Press **“Enter”** button in the high lighted options, the abc or ABC will display, then you can key in and change the login name. 2. Press **“Next** or ►”button to key-in second text. 3. Press **“Enter”** button to save the change. ***Repeat the steps above, for password key-in.**
STEP 2	Key in the Login name ***Default login name: aa***	Press **“Enter”** button to display the Login/logout options.	
STEP 3	Enter the password ***Default password:11***	Press▲▼ button to change the highlighted option.	
STEP 4	Click on**”Login”** option and enter the system.	Press **“Enter”** button to Log in system.	

The user can use it to login the system for the initial setup.

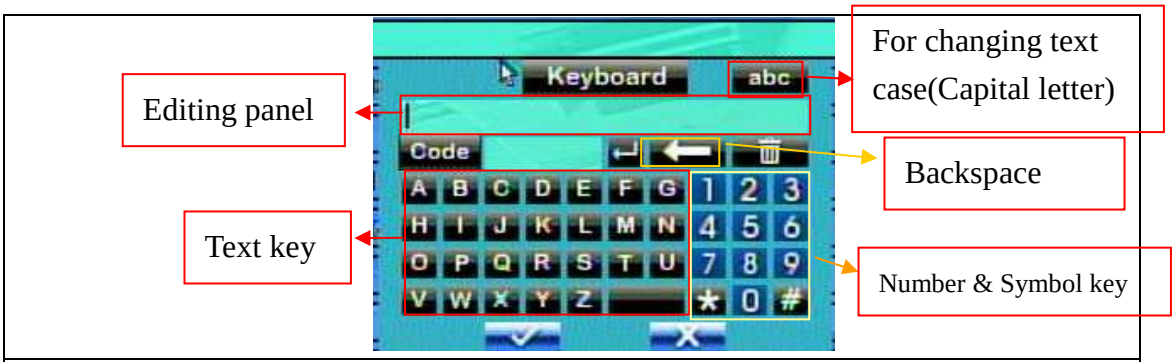
If the user does not login the system, he/she will be treated as "Guest" and can only view live video display.

The system allows up to 18 user accounts.

The administrator can set up the login name and password for each user.

If the user have forgotten all the administrator-level passwords, please contact the local dealer or installer to recover from it.

Text Input as below:



In the **"abc"** button, there's 3 types of functions:

abc = No capital letters

ABC = All capital letters

Code

For remote control:

Press **mark** to bring up a list of punctuation marks and special characters.	The highlighted character in the list shows the selected one.	Press ▲▼◄► button to change the selection.

If you make a mistake, press **BS** to remove the character to the left of the cursor, or press **DEL** to delete the character at the current cursor position.

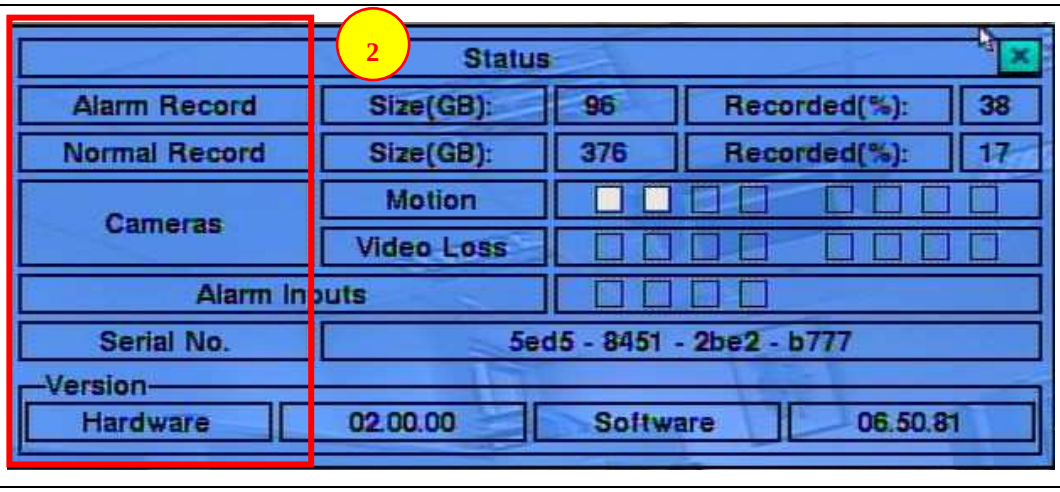
In text editing mode press **ENTER** to exit and save changes, press **ESC** to exit without making changes.

3.1.2. Status:

Description:

This function will display the status of system, including:
Alarm Recording Status, Normal Recording Status, Camera Status, Alarm Input Status, Product Serial Number as well as Product Version Number.

OSD DISPLAY MENU(Status)



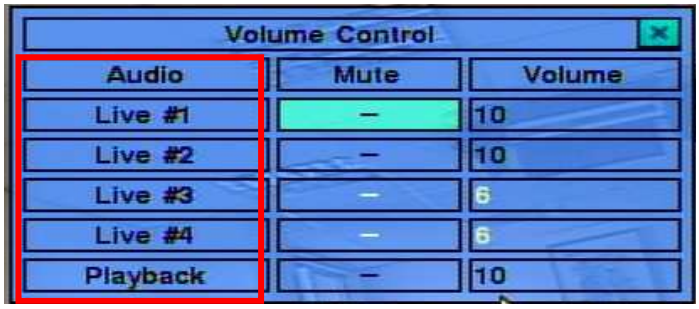
Checking Procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"STATUS"** icon.	1.Press **"MENU"** button.
STEP 2	The **"Status"** menu will be displayed.	2. Press"▲▼◀▶"button to change the highlighted option and Press **"Enter"** button.
STEP 3	Right click for EXIT and then click on **"ESC"** Icon for EXIT.	Press **"ESC"** button for exit.

3.1.3 Volume:

Description:

In this function, you can check the live recording volume and playback volume.

OSD DISPLAY MENU(Volume)



Setting Procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"Volume"** icon.	1.Press **"MENU/ESC"** button.
STEP 2	The **"Volume"** menu will be displayed. And then Click in the respective item.	2. Press"▲▼◄►" button to change the highlighted option and Press **"Enter"** button.
STEP 3	Right click for EXIT and then click on **"ESC"** Icon for EXIT.	Press **"MENU/ESC"** button for exit.

Other Functions		
Functions	**Description**	**Button/Remote control**
Mute	To mute the selected audio channel.	Press "**ENTER"** button or**"+/-"** to check/uncheck this item.
The default setting is "**-**", unchecked.		
Volume	The Status menu will be displayed.	Press**"+/- "**buttons to change the value (1-10).

3.1.4. Video adjustment:

Description:

You can adjust the Brightness, Contrast ,Hue and Saturation in this option. When you enter this option, the basic operation menu will be displayed in the bottom(3), as below:

OSD DISPLAY MENU(Video adjustment)

1.VIDEO ADJUSTMENT OPTION

2.DISPLAY ADJUSTING TABLE(Brightness/Contrast/Hue/Saturation)

3. BASIC OPERATION MENU

Setting Procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"Video adjustment"** icon.	1. Press **"MENU"** button.
STEP 2	The **"Video adjustment"** menu will be displayed, and then select the value for your needs.	2. Press▲▼◄► button to change the highlighted option and Press **"Enter "**button.
STEP 3	Right click for EXIT and then click on **"ESC"** Icon for EXIT.	3.Press **"+/-"** to adjust the selected item. 4. Press**" ESC"** button for exit.

The functions of basic operation menu		
Picture	**Functions**	**Description**
	Menu	Press it can return back to OSD Display menu.
	SEARCH	For displaying searching menu, The searching result is memorized automatically.(Administrator/Supervisor)
	Numeric	For selecting camera (Channels).
	ESC	EXIT
	Factory reset all	Reset all values back to factory setting.
	Factory reset this	Reset all values back to factory setting.
	Restore	Reset all values back to factory setting.
	Record	Press it for recording video.
	Alarm Reset	Reset all functions of alarm

3.1.5. VGA DISPLAY

Description:

The system will adjust the VGA resolution ,automatically.
So the function is locked.

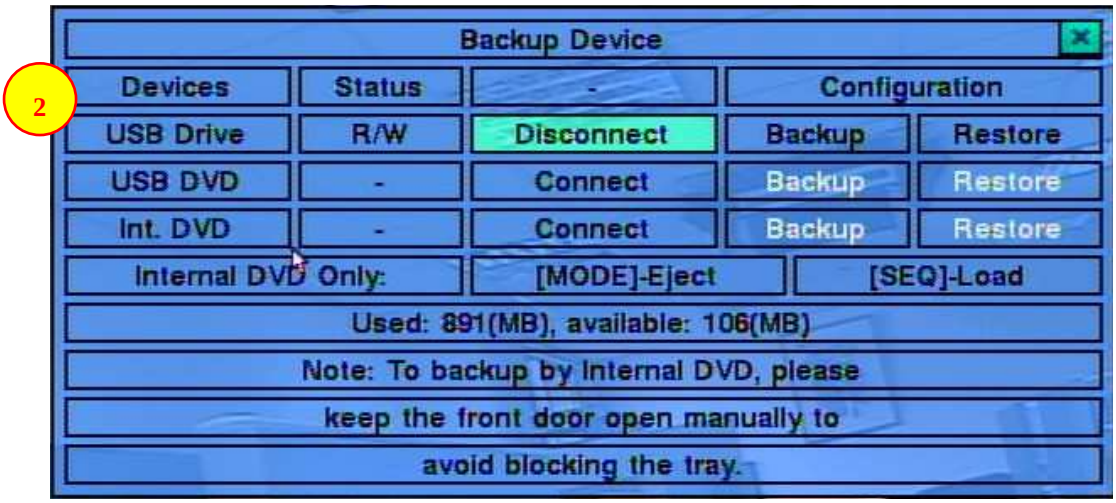
OSD DISPLAY MENU(VGA DISPLAY)

3.1.6.Backup device:

Description:

The system supports a variety of USB 2.0 storage devices.
And also, it has 2 functions:(1)backup(2)Restore.

OSD DISPLAY MENU(Backup Device)



Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"Backup Device"** icon.	1.Press **"Menu"** button.
STEP 2	The **"Backup Device"** menu will be displayed.	**2.** Press"▲▼◄►" button to change the highlighted option and Press Enter.
STEP 3	Right click for EXIT and then click on **"ESC"** Icon for EXIT.	**3.** Press**"ESC"** button for exit.

Connect/Disconnect – If the backup device is disconnected (as shown in Current Status), please plug the device in the USB port and/or insert a DVD for DVD device, and then press"**ENTER"(Mouse: Left click)** button to command the system to connect with it. If the device is already connected (EX. R/W - Read/write, as shown in Current Status), please press"**ENTER"(Mouse: Left click)** button to command the system software to disconnect with the device, and then unplug the device from the backup port.

Before using USB pen drive, please format it to FAT32 file system by MS-Windows.

The backup device has to be connected by the system software before it can be used to read/write. If it failed to connect, please unplug the device, and then plug the device in the USB port again.

Some backup devices may have compatibility problems. Please contact your local dealer or installer for the supported devices.

Backup:

Press "**ENTER" (Mouse: Left click)** Button when this item is selected to backup the configurations of this unit to the corresponding USB device.

The user may enter the directory to backup the configurations.

Restore:

Press **ENTER (Mouse: Left click)** Button when this item is selected to restore the configuration files in the corresponding backup device to this unit.

The user may enter the directory to restore the configurations.

For the compatible device of U.S.B, please refer to **"APPENDIX G"**.

3.1.7.SETUP(Administrator)

1.Main page of setup options.

MAIN PAGE(OSD Display MENU)

Setup Page

2. Introduction:

Setup page		
NO.	**Description**	**Functions**
1	**Pre-camera**	This option allows the administrator to define some fundamental attributes for all the installed cameras.
2	**Camera**	This option allows the administrator to define the attributes for each camera.
3	**Alarm**	This option allows the administrator to define the attributes for each alarm input, and the actions if it's triggered.
4	**SEQ Display**	This option allows the administrator to define the display pages in SEQ Display for main monitor.

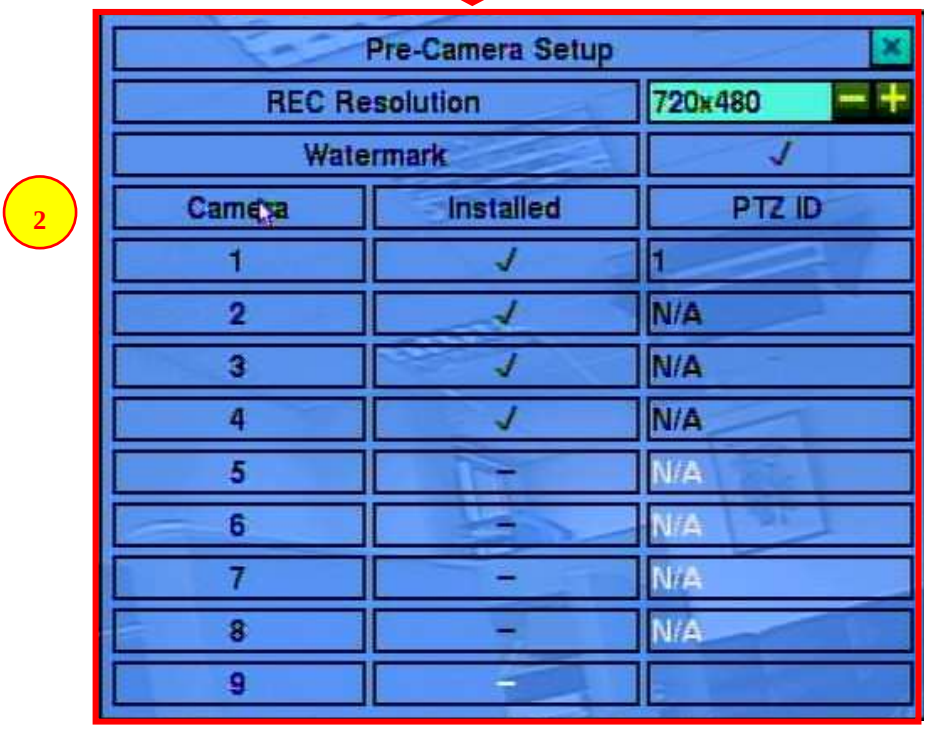
5	**Scheduled Record**	This option allows the administrator to define the way of recording for the system.
6	**H.D.D**	This option allows the administrator to format/clear each HDD, set Alarm Record size and Normal Record size of each HDD, and define the behaviors for Alarm Record and Normal Record if it reaches the end of the last HDD in the system.
7	**Password**	This option allows the administrator to add new users, delete existing ones, and/or modify the user's name, password or level.
8	**System**	This option allows the administrator to set the system time, time zone, time synchronization, language, etc.
9	**RS232/422/485**	This option allows the administrator to setup RS-485 control port.
10	**Network**	This option allows the administrator to setup all Ethernet network related parameters.
11	**Factory Default**	Return to factory setting
12	**Esc**	EXIT

3.1.8.Pre-camera

Description:

There are up to 4 cameras which can be connected to the system. The Pre-Camera Setup allows the administrator to define some fundamental attributes for all the installed cameras as well as the recording resolution.

Setup Page



Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on**" Pre-camera"** icon.	1. Press▲▼◄► button to change the highlighted option
STEP 2	The **"Pre-Camera"** Setup will be displayed.	2.Press**"Enter"** button. 3. Press **+/-** to adjust the selected item.
STEP 3	Right click for EXIT and then click on **"ESC"** Icon for EXIT.	4. Press "**ESC"** button for exit.

All Functions		
Functions	**Description**	**Button/Remote control**
REC Resolution	For selecting recording resolution.	1. Press**" +/- "**button to select the recording resolution. (Mouse: Left click+/-)
For NTSC, it can be 720x480, 720x240, or 360x240; For PAL, 720x576, 720x288, or 360x288.		
Watermark	For selecting to record with digital watermark or not.	Press**"ENTER**"or"**+/-** "button (Mouse: Left click)
Installed	For checking the camera to see if it is installed or not.	Press**"ENTER"** or **+/-** button (Mouse: Left click) to check/uncheck this item.
PTZ ID	For checking the PTZ ID.	Press **+/-** button to change the value (N/A or 0-255)

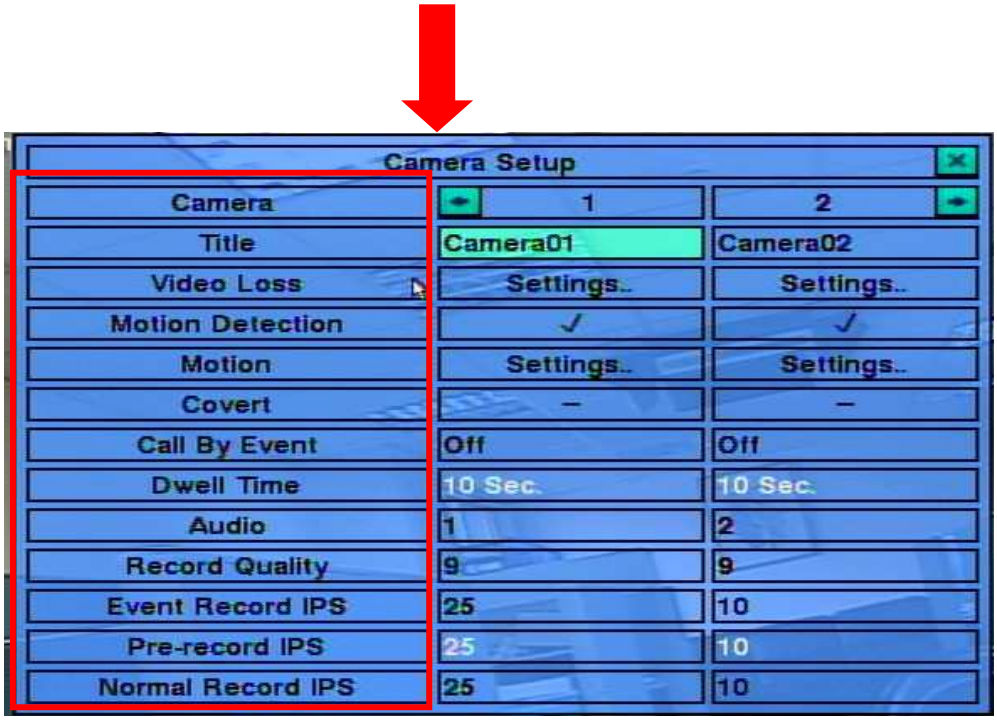
3.1.9. Camera

Description:

The Camera Setup allows the administrator to define the attributes for each camera.

There are up to 4 cameras which can be connected to the system.

Setup Page



Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"Camera "** icon.	1. Press▲▼ button to change the highlighted option
STEP 2	The **"Camera"** Setup will be displayed.	2.Press **"Enter"** button.
STEP 3	Right click for EXIT and then click on **"ESC"** icon for EXIT.	3.Press **"ESC"** button for exit.

All Functions			
No.	**Functions**	**Description**	**Remote control**
1	**Title**	The title (Max. 8 characters) of this camera.	1. Press **"Enter"** button in the high lighted options, the abc or ABC will display, then you can key in and change the name of camera 2. Press **"Next** or **►"**button to key-in second text. 3. Press **"Enter"** button to save the change.
Press **"ESC"** for restore the title which was changed, press **"Enter"** again for confirm the change.			
2	**Video Loss Settings.**	It can be used to setup the action settings when video loss is detected for this camera.	Press"**ENTER"** or +/- button (Mouse: Left click).
For more information, please refer to **"Video loss settings"**.			
3	**Motion Detection**	It can be used to setup the motion settings	Press"**ENTER"** or **+/-** button to check/uncheck this item
	Motion Settings	Used to setup the motion settings.	Press"**ENTER"** button to check/uncheck this item

4	**Covert**	Only the Administrator can see the video if this function was activated.(hidden video)	Press "**ENTER"** or **+/-** button to check/uncheck this item
5	**Call By Event**	To call the event of Camera	Press **+/-** button to check/uncheck this item
6	**Dwell Time**	The lasting time of event/alarm /motion	Press **+/-** button to check/uncheck this item
7	**Audio**	For AUDIO IN of cameras	Press **+/-** button to check/uncheck this item
8	**Record Quality**	The record quality for this camera.	Press **+/-** button to check/uncheck this item
9	**Event Record IPS**	Images Per Second(frame per second) For the image quality of Events.	Press **+/-** button to check/uncheck this item
	Pre-record IPS	Preset the image quality of Events.	Press **+/-** button to check/uncheck this item
	Normal Record IPS	For the image quality of normal recording.	Press **+/-** button to check/uncheck this item

The Total Event Record IPS / Pre-record IPS should not exceed the system recording capacity (NTSC: 240/CIF, 120/Half-D1, 60/Full-D1; PAL: 200/CIF, 100/Half-D1, 50/Full-D1), or the system will lower the actual rate automatically while recording.

3.1.9.1.Video loss :

Description:

This option allows the administrator to define the way of alert, after the video loss of camera.

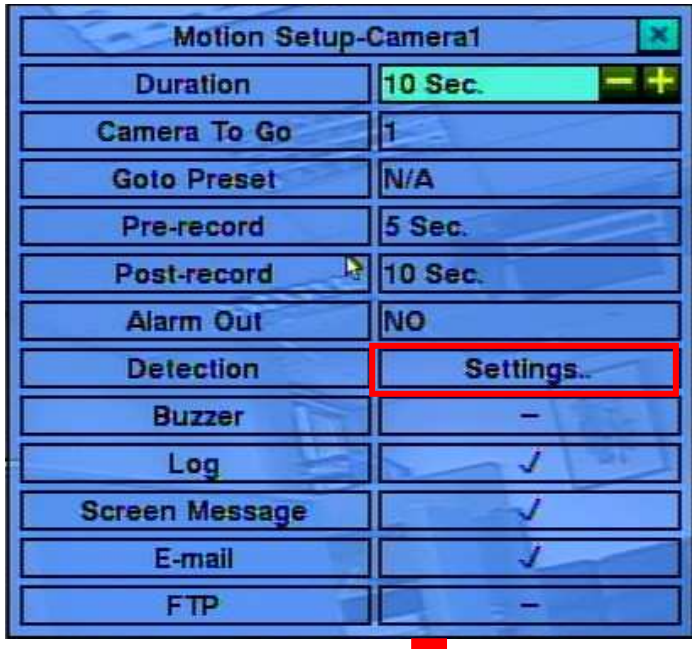
Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click **"Settings"** on video loss of "**Camera Setup"** .	1. Press ▲▼◄►button to go to video loss option on camera setup.
STEP 2	The**"video loss setup"** page will be displayed.	2.Press**"Enter"** button on **"Settings"** of video loss options.
STEP 3	Right click for EXIT and then click on **"ESC"** Icon for EXIT.	3.Press**"+/- "**button to change the value for each settings. 4.Press**"ESC"** button for exit.

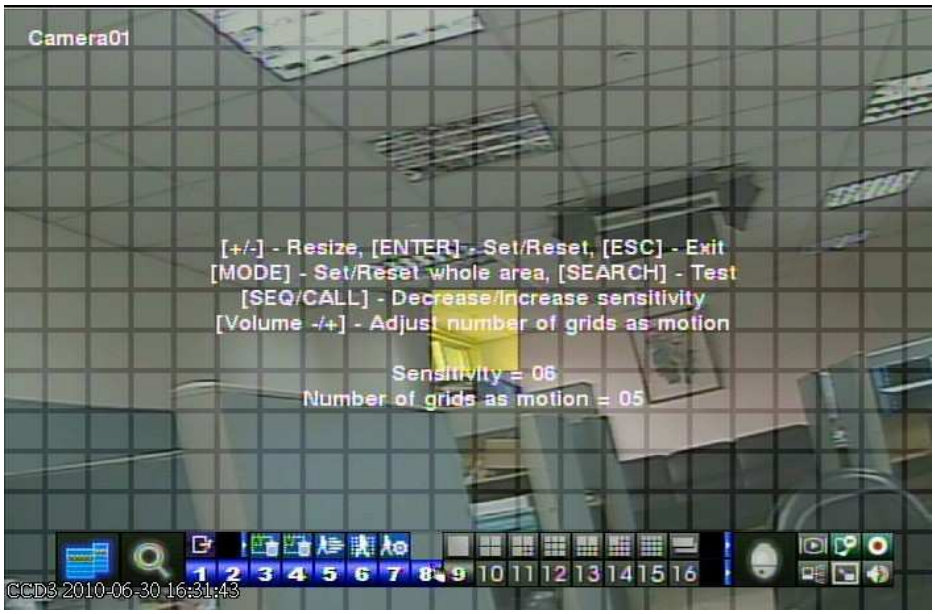
All Functions			
No.	**Functions**	**Description**	**Button/Remote control**
1	**Duration**	The delay time of Alarm and buzzer after the video loss was detected.	Press"**ENTER"** or **+/-** button (Mouse: Left click)
2	**Camera to go**	To preset the position in next field after video loss was detected. (For PTZ camera only)	Press"**ENTER"** or **+/-** button (Mouse: Left click).
3	**Goto Preset**	To define the preset position to go to for the **"Camera to go"** Camera in last field if video loss was detected. (For PTZ camera only)	Press"**ENTER"**or **+/-** button (Mouse: Left click).
4	**Pre-record**	To define the delay time of recording before video loss was detected.	Press **+/-** button (Mouse: Left click)
5	**Alarm Out**	To define which Alarm Output will be triggered when video loss was detected.	Press **+/-** button (Mouse: Left click)
Alarm Outputs (**NC (1), NO (2)**).			
6	**Buzzer**	To activate the internal Buzzer when video loss of this camera was detected	Press"**ENTER"**or **+/-** button (Mouse: Left click)
7	**Log**	To log to event logs	Press"**ENTER"**or **+/-** button (Mouse: Left click)
8	**Screen Message**	To display the event message on the screen.	Press"**ENTER"**or **+/-** button (Mouse: Left click)
9	**E-mail**	To send the event e-mail to remote station.	Press"**ENTER"**or **+/-** button (Mouse: Left click)
10	**FTP**	To send the recorded event video/audio files to FTP server.	Press"**ENTER"**or **+/-** button (Mouse: Left click)

3.1.9.2. Motion detection:

Description:

This option allows the administrator to define the way of alert, after detected the motion from camera.




Camera01
[+/-] - Resize, [ENTER] - Set/Reset, [ESC] - Exit
[MODE] - Set/Reset whole area, [SEARCH] - Test
[SEQ/CALL] - Decrease/Increase sensitivity
[Volume -/+] - Adjust number of grids as motion
Sensitivity = 06
Number of grids as motion = 05
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
CCD3 2010-06-30 16:31:43

Setting procedures		
STEPS	MOUSE	Button/Remote control
STEP 1	Click on**"Motion"** in **"Camera setup"**.	1. Press**"Enter"** button to go to the page.
STEP 2	The **"Motion setup"** option will be displayed.	2. Press▲▼ button to select the items.
STEP 3	Use the Check symbol to select the way of motion detection.	3. Press **"Enter"** button.
STEP4	Click **"Settings"** on **"Detection"** option.	4. Press▲▼ button to select the items
STEP 5	Click on the area which you need to detect the motion	5. Press **"Enter"** button. 6. Press **"Enter"** button again to select the area of motion.
STEP 6	Right click for EXIT.	7. Press **"ESC"** button for exit.

All Functions			
No.	**Functions**	**Description**	**Button/Remote control**
1	**Duration**	The delay time of Alarm and buzzer after the motion was detected.	Press"**ENTER"**or +/- button (Mouse: Left click)
2	**Camera to go**	To preset the position in next field after video loss was	Press**"ENTER"**or +/- button (Mouse: Left

		detected. (For PTZ camera only)	click).
3	**Goto Preset**	To define the preset position to go to for the **"Camera to go"** Camera in last field if video loss was detected. (For PTZ camera only)	Press**"ENTER"**or **+/-** button (Mouse: Left click).
4	**Pre-record**	To define the delay time of recording before motion was detected.	Press **+/-** button (Mouse: Left click)
	Post-record	To define the delay time of recording after motion was detected.	Press **+/-** button (Mouse: Left click)
5	**Alarm Out**	To define which Alarm Output will be triggered when motion was detected.	Press **+/-** button (Mouse: Left click)
Alarm Outputs (NC (1), NO (2)).			
6	**Detection Settings**	Used to setup the motion detection settings (as shown above).	Press**"ENTER"** button. (Mouse: Left click)
7	**Buzzer**	To activate the internal Buzzer or not when the motion was detected	Press**"ENTER"**or **+/-** button (Mouse: Left click)
8	**Log**	To log into event logs.	Press**"ENTER"**or **+/-** button (Mouse: Left click)
9	**Screen Message**	To display the event message on the screen.	Press**"ENTER"**or **+/-** button (Mouse: Left click)
10	**E-mail**	To send the event e-mail, remotely .	Press**"ENTER"**or **+/-** button(Mouse: Left click)
	FTP	To send the recorded event video/audio files to FTP server.	Press**"ENTER"**or **+/-** button (Mouse: Left click)

The detection area and sensitivity are also used for the Smart Search information.

There won't be any Smart Search information stored outside the detection area.

So, it's better to enable the whole area if the motion detection for the camera is disabled (and only Smart Search is used).

Press"**ENTER"** in **Settings..** to call up Motion Detection Setup (as shown) for this camera.

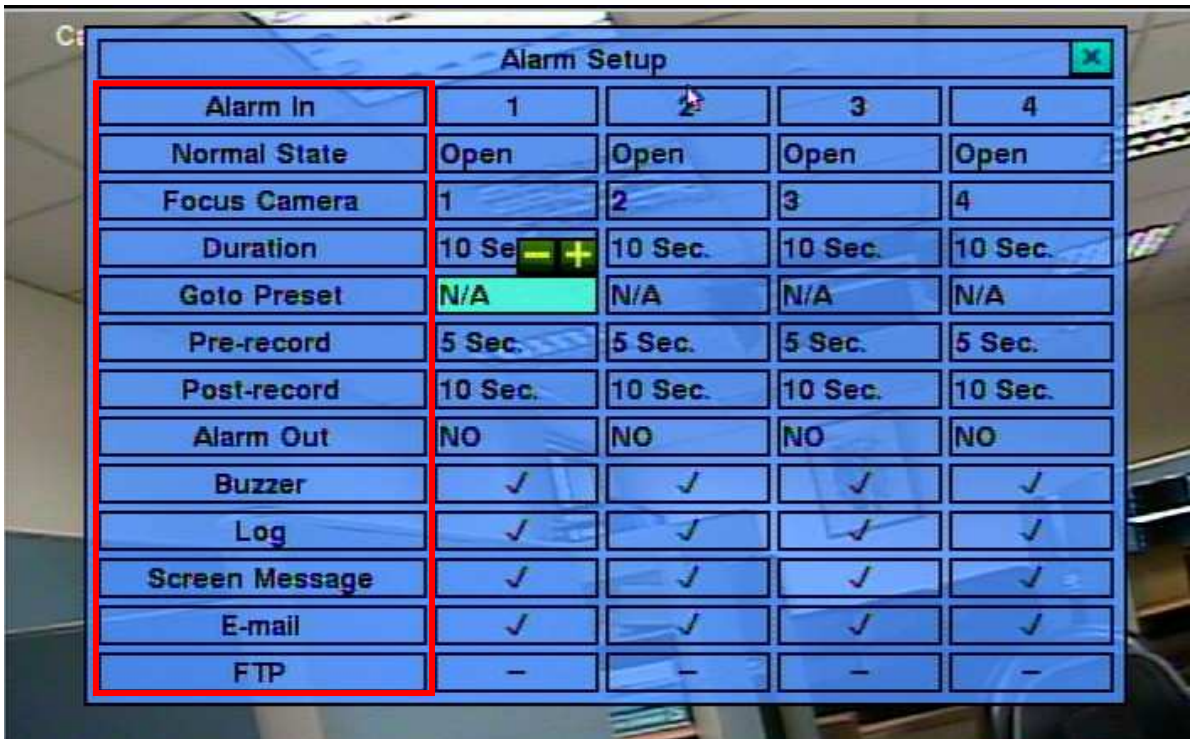
In Motion Detection Setup, the video area is divided into many small grids, and the area with **gray grids** is the area which will **be detected for motion**, while transparent grids not detected for motion. Besides, there is a (yellow) Mask window.

3.1.10. Alarm

Description:

The Alarm Setup allows the administrator to define the attributes for each alarm input, and the actions if it's triggered.

Setup Page



Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"Alarm"** icon.	1.Press**"Enter"** button to go to the page.
STEP 2	The **"Alarm setup"** menu will be displayed.	2. Press▲▼button to select the items.
STEP 3	Click **+/-** button to select the options.	3. Press **"Enter"** button.
STEP4	Right click for EXIT and then click on **"ESC"** Icon for EXIT.	4. Press "**ESC"** button for exit.

All Functions			
No.	**Functions**	**Description**	**Button/Remote control**
1	**Normal State**	To select the connection type of alarm (**NC/NO/N/A**).	Press **+/-** button ,to select **N/A**, **Close** or **Open**
2	**Focus Camera**	The camera corresponding to this alarm input.	Press **+/-** button to adjust the value.
3	**Duration**	The delay time of Alarm and buzzer after the alarm input was triggered	Press"**ENTER"**or **+/-** button (Mouse: Left click)
4	**Goto Preset**	To define the preset position to go to for the **"Camera to go"** Camera in last field if video loss was detected. (For PTZ camera only)	Press"**ENTER"**or **+/-** button (Mouse: Left click).
5	**Pre-record**	To define the delay time of alarm before alarm input was triggered.	Press **+/-** button (Mouse: Left click)
	Post-record	To define the delay time after this alarm input was triggered.	Press **+/-** button (Mouse: Left click)
6	**Alarm Out**	To define which Alarm Output will be triggered when the alarm input was triggered.	Press **+/-** button (Mouse: Left click)
Alarm Outputs (**NC (1), NO (2)**).			
7	**Buzzer**	To activate the internal Buzzer when this alarm	Press"**ENTER"**or **+/-** button (Mouse: Left

		input was triggered.	click)
8	**Log**	To log into event logs.	Press "**ENTER"**or **+/-** button (Mouse: Left click)
9	**Screen Message**	To display the event message on the screen.	Press "**ENTER"**or **+/-** button (Mouse: Left click)
10	**E-mail**	To send the event e-mail, remotely .	Press "**ENTER"**or **+/-** button (Mouse: Left click)
	FTP	To send the recorded event video/audio files to FTP server.	Press "**ENTER"**or **+/-** button (Mouse: Left click)

3.1.11.SEQ DISPLAY(Switching channel)

The SEQ Display Setup allows the Administrator to define the display pages in **"SEQ Display"** for main monitor and call monitor.

There are **4** types of displaying for main monitor:

1Windows(1W: Full screen), 4 Windows (4w:quad), 7-Windows(7w), and 9-Window(9w).

Setup Page

Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"SEQ Display"** icon.	1. Press▲▼◄► button to change the highlighted option
STEP 2	The **"SEQ Display Setup"** menu will be displayed.	2. Press **"Enter"** button.
STEP 3	Right click for EXIT and then click on **"ESC"** Icon for EXIT.	3. Press "**ESC"** button for exit.

All Functions		
Functions	**Description**	**Button/Remote control**
Total Pages	For Showing the total page of **SEQ Display**.	Press **+/-** buttons to select the desired number from the available list.
Dwell Time	The dwell time(Switching channel) (3 ~ 60 seconds, discrete) for each page	Press **+/-** buttons to change the value.
Page setting	For **AUDIO IN** of cameras.	Press **"ENTER"**button (Mouse: Left click) to call up Display Page Setup

The functions of basic operation menu		
Picture	**Functions**	**Description**
	Menu	Press it can return back to **OSD Display** menu.
	SEARCH	For displaying searching menu, The searching result is memorized automatically. **(Administrator/Supervisor)**
	Numeric	For selecting camera (Channels).
	ESC	**EXIT**
	Page down/Page up	To change the channels.
	Record	Press it for recording video.
	Alarm Reset	Reset all functions of alarm

3.1.12. Scheduled Record

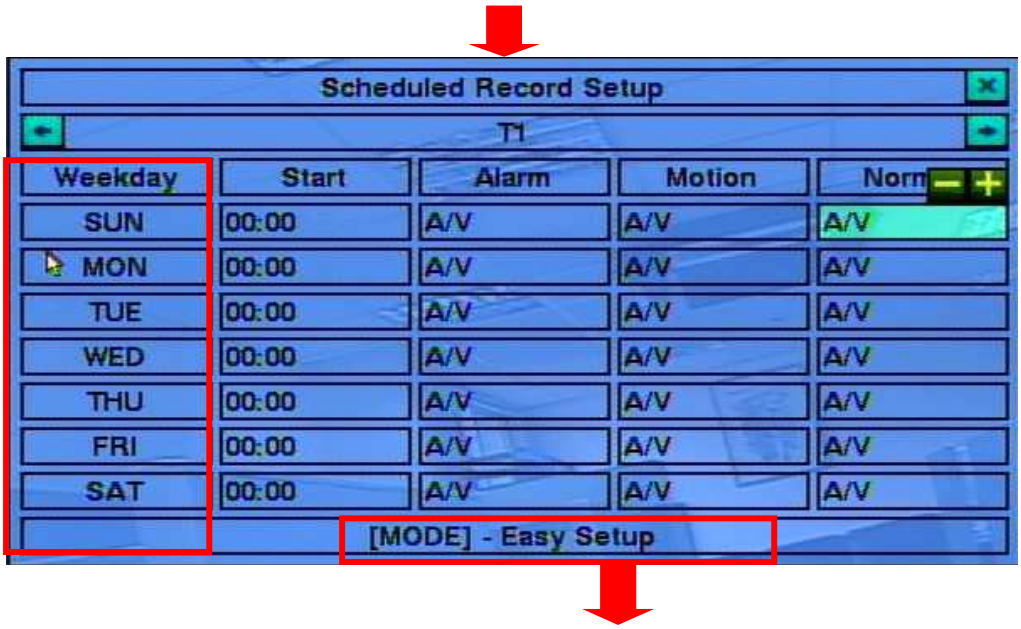
Description:

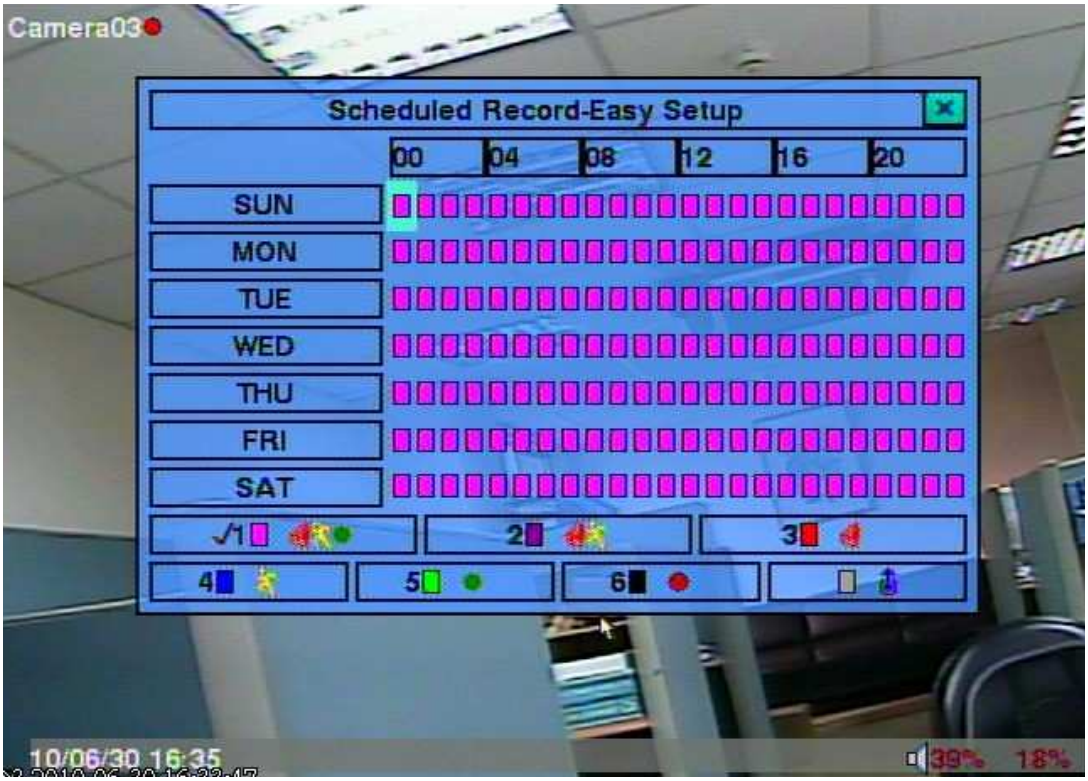
*The Scheduled Record Setup allows the administrator to define when and how to record for the system.

*There are up to 16 time segments (**T1 – T16**) for each weekday.

*Easy Setup allows the administrator to use a simpler and easier way to setup the scheduled record of the system.

Setup Page





Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on ”Scheduled Record” icon.	1. Press▲▼◄► button to change the highlighted option
STEP 2	The ”Scheduled Record Setup” will be displayed.	2. Press **”Enter”** button .
STEP 3	Right click for EXIT.	3. Press”**ESC”**button for exit.
Easy setup		
STEP 1	Click on **”Easy Setup”** option on Scheduled Record Setup menu.	1.Press”**MODE”** button
STEP 2	The **“Scheduled Record Setup-Easy setup”** menu will be displayed.	2.Press▲▼◄► button to change the highlighted option 3. Press **+/-** button to set the focus interval upwardly/downwardly. 4. Press **”Enter”** button.
STEP 3	Right click for EXIT.	5.Press**”ESC”**button for exit.
All Functions		
Functions	**Description**	**Button/Remote control**

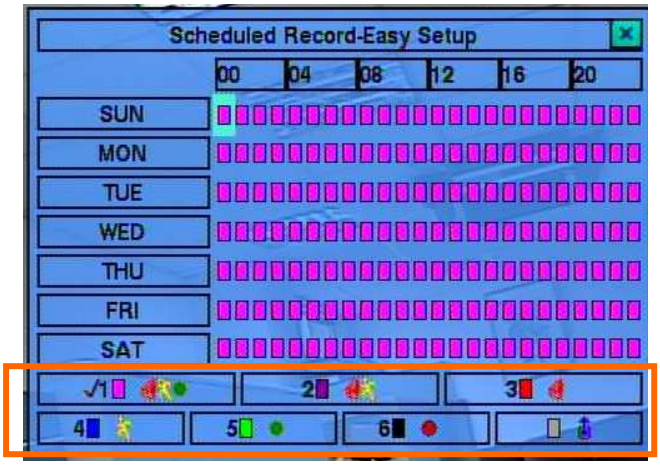
Alarm	Record mode (No, Video, Audio/Video) when certain alarm input is triggered.	Press **+/-** button (Mouse: Left click) to change the value.
MODE	To enter Easy Setup for Schedule Record as described in the following paragraphs	Press "**MODE"** button.
Motion	Record mode (No, Video, Audio/Video) when certain motion is triggered.	Press **+/-** button (Mouse: Left click) to change the value.
Normal	Normal recording mode. (No, V (Video only)), or A/V (Audio/Video)	Press **+/-** button (Mouse: Left click) to change the value.
Start	To set the starting time(increment at 30 minutes).	Press **+/-** button to select the desired start time.

The end time of this time segment is implicitly set as the start time of next time segment, or the start time of the first time segment of the same weekday if it's the last one.

Example: If the user sets the start time of T1/MON as 9:00, T2/MON as 18:00, T3-T16/MON as N/A (Not Available), then T1/MON is 9:00-18:00, T2/MON is 0:00-9:00, and 18:00-24:00.

In a time segment, if both Alarm and Motion are set to **"OFF"**, the audio/video will be treated as Normal unless there's Video Loss.

The symbol of Easy setup



No.	Picture	Functions	Mouse/Remote control
1		**Alarm+Motion+Normal**	Press"**ENTER"**Button **(Mouse: Left click)(Bottom)**
2		**Alarm+Motion**	Press"**ENTER"**Button **(Mouse: Left click)(Bottom)**
3		**Alarm**	Press"**ENTER"**Button **(Mouse: Left click)(Bottom)**
4		**Motion**	Press"**ENTER"**Button **(Mouse: Left click)(Bottom)**
5		**Normal**	Press"**ENTER"**Button **(Mouse: Left click)(Bottom)**
6		**No Record**,	Press"**ENTER"**Button **(Mouse: Left click)(Bottom)**

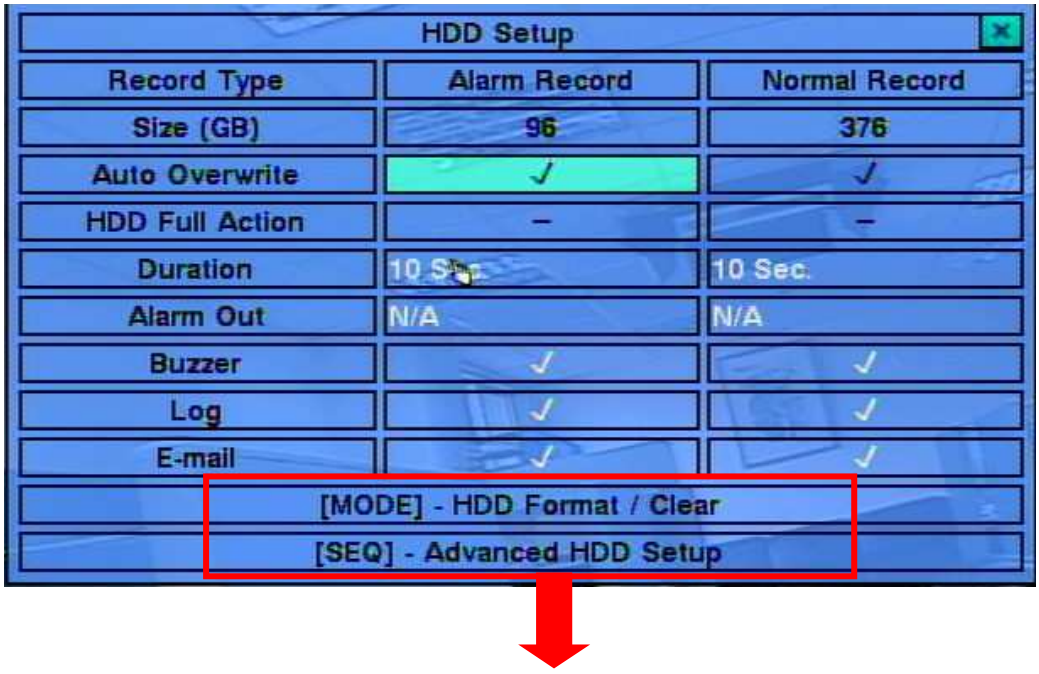
Numeric 1-6

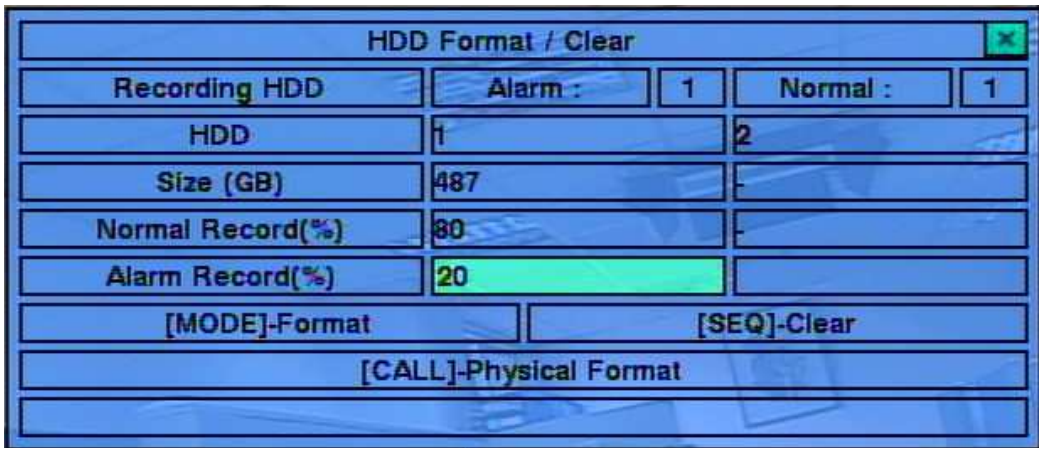
Press these buttons(1-6 numbers on the remote control/panel) to select the active Recording Mode. The user may also when the focus is on the Recording Mode to activate it.

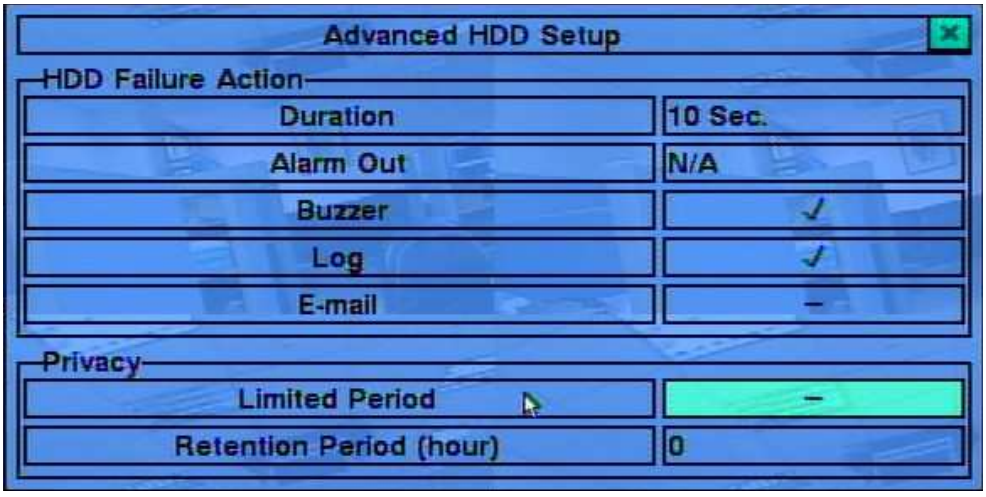
The display marquee will show the grid, when you using the +/- button for selecting the Recording mode (one grid for one hour).

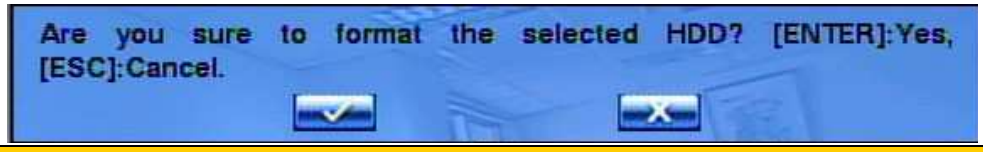
3.1.13. H.D.D(HARD DISC)

Setup Page









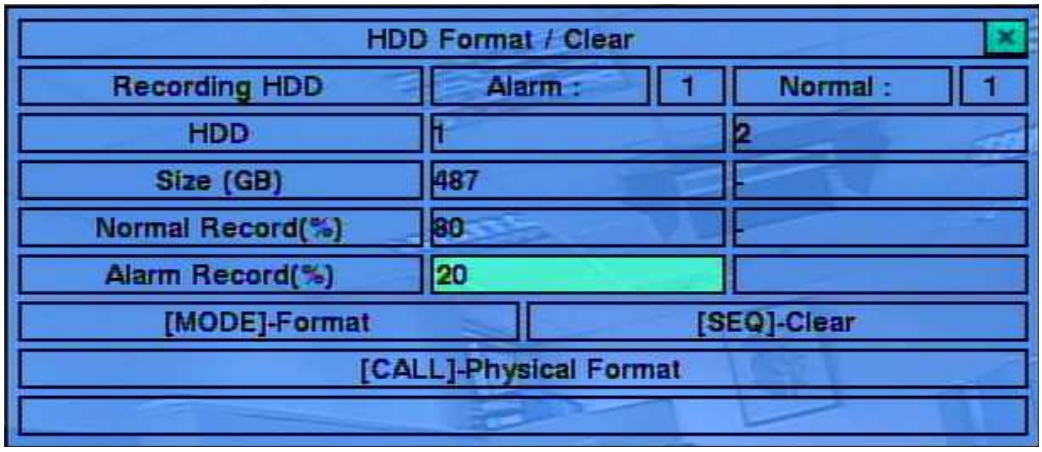
Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"H.D.D "**icon.	1. Press▲▼◄► button to change the highlighted option
STEP 2	The H.D.D Setup menu will be displayed.	2. Press**"Enter"**button.
STEP 3	Right click for EXIT.	3. Press**"ESC"**button for exit.

All Functions		
Functions	**Description**	**Button/Remote control**
MODE	To format/clear the HDDs	1. Press**"Mode"**buttons to copy all settings. 2. Press **"Enter"**button to confirm the change. 3. Press **"ESC"** to exit.

		(Mouse: Left click)
SEQ	Advanced HDD Setup	1. Press **"Enter"**button to confirm the change. 2. Press**"ESC"** to exit. **(Mouse: Left click)**
ESC	For return to previous page or exit.	Press**"ESC"**button **(Mouse: Left click)**
Size (GB)	the total HDD storage in GB (Giga-Byte) for Alarm Record and Normal Record respectively	
If the total alarm record size is zero, the alarm video/audio will be recorded in normal record partition. **If the total normal record size is zero, the normal video/audio will be recorded in alarm record partition.**		
Auto Overwrite	Automatic overwrite of the recorded video/audio from HDD#1 when the Alarm/Normal Record disc drive capacity reaches the end of the last HDD.	Press"**ENTER"** or **+/-** to check/uncheck this item **(Mouse: Left click)**
If Auto Overwrite is disabled and the Alarm/Normal Record disc drive capacity reaches the end, the system will not overwrite the recorded video/audio, and hence not record Alarm/Normal video/audio, until the user presses the **Alarm Reset** button.		
HDD Full Action	When the H.D.D is full the Alarm will active(normal recording mode). You enable or disable it.	Press"**ENTER"** or **+/-** to check/uncheck this item **(Mouse: Left click)**
Duration	The delay time of Alarm and buzzer after the video loss was detected.	Press"**ENTER"**or +/- button **(Mouse: Left click)** to adjust the value.
Alarm Out	To define which Alarm Output will be triggered when the corresponding partition, Alarm Record or Normal Record, is full.	Press"**ENTER"** or **+/-** to check/uncheck this item **(Mouse: Left click)**
Alarm Outputs (**(N/A,NC (1), NO (2)**).		

Buzzer	To activate the internal Buzzer, when the video loss was detected	Press **ENTER** or **+/-** to check/uncheck this item. **(Mouse: Left click)**
Log	To log into event logs.	Press **ENTER** or **+/-** to check/uncheck this item. **(Mouse: Left click)**
E-mail	To send the event e-mail , remotely	Press **ENTER** or **+/-** to check/uncheck this item. **(Mouse: Left click)**

H.D.D format/Clear:



The HDD must be formatted before it can be used to record video/audio. The HDD Format/Clear screen allows the administrator to format and/or clear each HDD, and set the size for Alarm Record partition and Normal Record partition for each HDD.

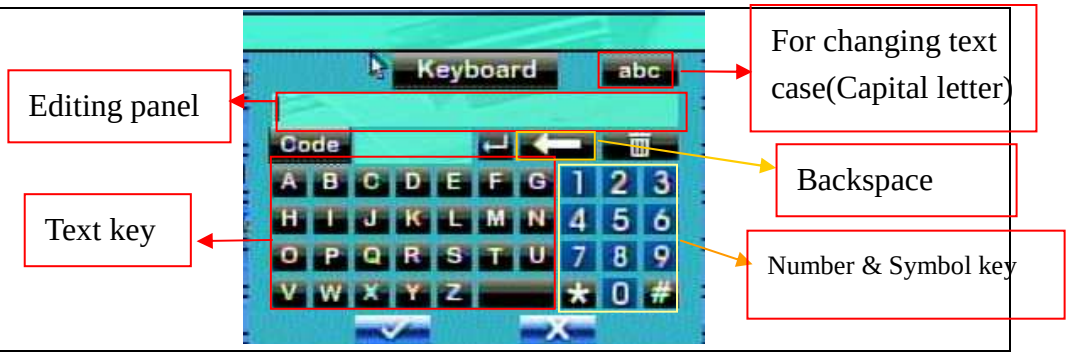
Please use only HDD with maximum storage size as 2TB, and make sure there's no remote user before formatting the HDD.

All Functions		
Functions	**Description**	**Button/Remote control**
MODE	For formatting HDDs.	1.Press **"Mode"** buttons to copy all settings. 2. Press**"Enter"** to confirm. 3.Press"**ESC"** to exit. **(Mouse: Left click)**
*If the HDD has not been formatted, it will be formatted and partitioned with default record size, **100% for Alarm and 0% for Normal**.*		

If it has been formatted, it will be formatted according to the Alarm REC Size (%) and Normal REC Size (%) displayed on the screen, but the previously recorded contents within the new size won't be cleared and will be accessible		
SEQ	Advanced HDD Setup	1.Press**"Enter"** to confirm. 2.Press**"ESC"** to exit. **(Mouse: Left click)**
*If the HDD has not been formatted, it will be formatted and partitioned with default record size, **100% for Alarm record and 0% for Normal record**.* *If it has been formatted (and recorded), it will be partitioned according to the Alarm Record Size (%) and Normal Record Size (%) displayed on the screen, and the previously recorded contents will all be cleared.*		
ESC	For return to previous page or exit.	Press **"ESC"** button. **(Mouse: Left click)**
Call	Physical Format	1.Press**"Enter"**to confirm. 2.Press**"ESC"**to exit. **(Mouse: Left click)**
The recording will be always optimized for performance & lifetime no matter it's for the first time or for the one hundredth times. ***The formatting would take less than 1 minute.*** ***We strongly recommend that the user use this physical format function to format the HDD for the first time.*** *The HDD will be physically formatted and partitioned with default record size, **100% for Alarm record and 0% for Normal record**.* *All the previously recorded contents will be cleared.*		
Size (GB)	the total HDD storage in GB (Giga-Byte) for Alarm Record and Normal Record respectively	
Alarm record(%)	Alarm Record Size (in percentage) for this HDD.	By Text input
if the alarm record percentage for all HDDs is zero, the alarm video/audio will be recorded in normal record partition. ***Please note that if the total normal record size is zero, the normal video/audio will***		

be recorded in alarm record partition.		
Normal record(%)	when Alarm/Normal Record disc drive capacity is full, it will active.	1. Press "**ENTER"** or **+/-** to check/uncheck this item **(Mouse: Left click)**

Text input:



In the "abc" button, there's 3 types of functions:

abc = No capital letters

ABC = All capital letters

Code

For remote control:

Press **mark** to bring up a list of punctuation marks and special characters.	The highlighted character in the list shows the selected one.	Press ▲▼◄► button to change the selection.

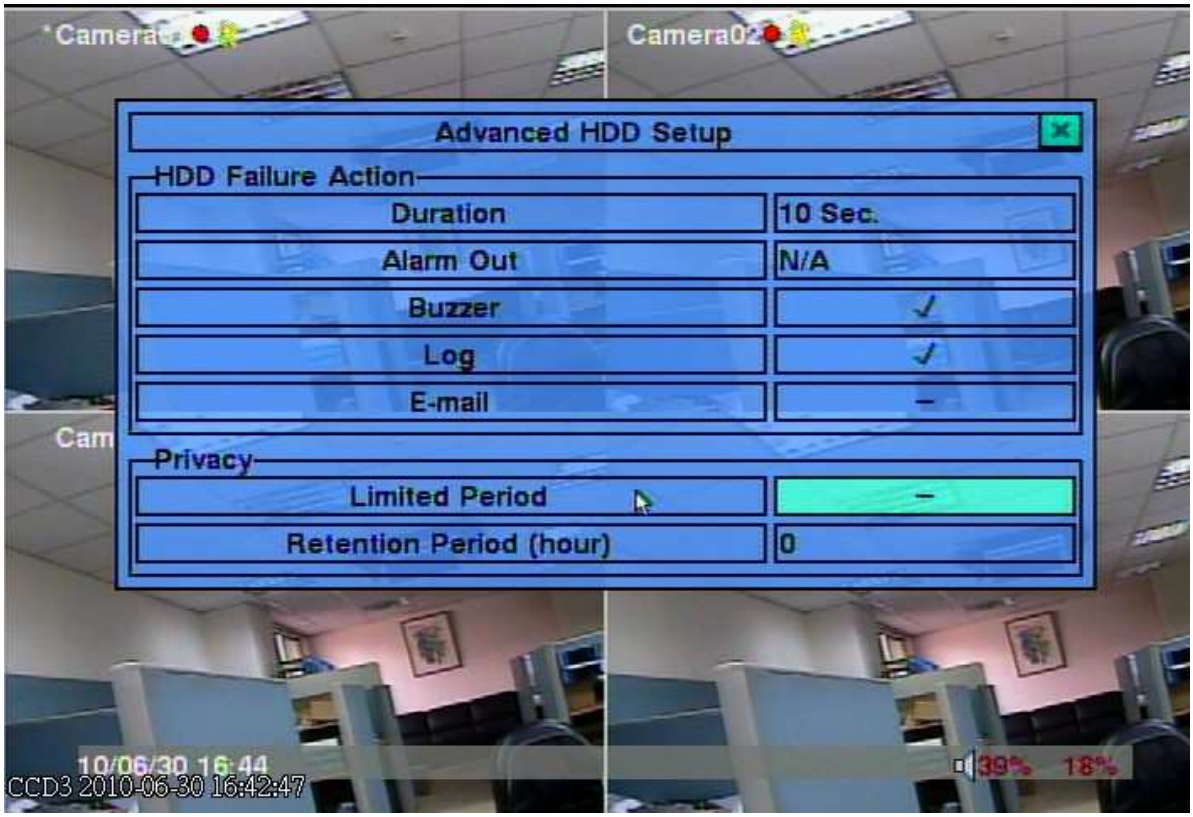
If you make a mistake, press **BS** to remove the character to the left of the cursor, or press **DEL** to delete the character at the current cursor position.

In text editing mode press **ENTER** to exit and save changes, press **ESC** to exit without making changes.

3.1.13.1.Advanced HDD setup:

Description:

The HDD Failure Action in Advanced HDD Setup allows the administrator to define how the system responds to the detected HDD failure, while the Privacy settings allow the administrator to set the DVR to record for Limited Period and the Retention Period of its HDD storage. The HDD Failure Action will be triggered if there's no available formatted HDD detected.



Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"SEQ"** option on HDD Setup Display menu.	1.Press"**SEQ"**button to call up advanced HDD setup.
STEP 2	The **"Advanced H.D.D Setup"**menu will be displayed.	2.Press ▲▼ button. (Mouse: Left click). 3.Press"**Enter"** to confirm the setting.
STEP 3	Right click for EXIT.	4.Press"**ESC"**button for exit.
All Functions		
Functions	**Description**	**Button/Remote control**
Duration	To define the delay time (in seconds)	Press **+/-** button to adjust

	of Alarm Out relay ,and the Buzzer will keep being triggered after HDD failure was detected	the value. (Mouse: Left click)
Alarm Out	To define which Alarm Output will be triggered when video loss was detected.	Press **+/-** button to select the options. (Mouse: Left click)
Alarm Outputs (NC (1), NO (2)).		
Buzzer	To activate the internal Buzzer when HDD Failed is detected	Press"**ENTER"**or **+/-** to check/uncheck this item. (Mouse: Left click).
Log	To log to event logs.	Press"**ENTER"**or **+/-** to check/uncheck this item. (Mouse: Left click).
E-mail	To send the event e-mail, remotely.	Press"**ENTER"**or **+/-** to check/uncheck this item. (Mouse: Left click).
Privacy		
Limited Period	To check/uncheck the limited period of HDD storage.	Press"**ENTER"**or **+/-** to check/uncheck this item. (Mouse: Left click).
Retention Period (hour)	To setup the retention period of the HDD storage, if the limited period was checked.	Press"**ENTER"**or **+/-** to check/uncheck this item. (Mouse: Left click).

If this item is set as 0, it will be treated as No Limited Period.

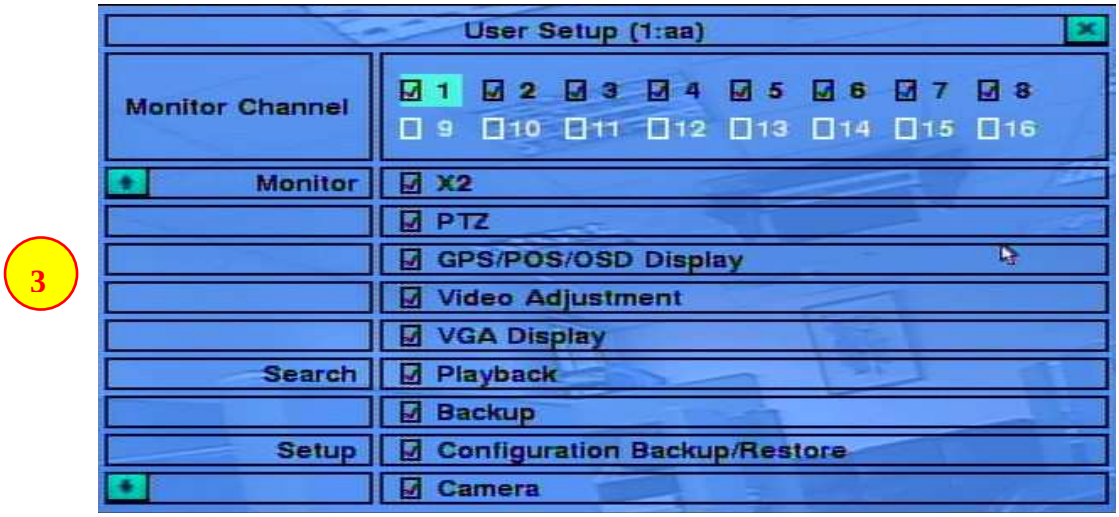
For text input, please refer to previous pages.

3.1.14.Password

Description:

The Password Setup allows the administrator to add new users, delete existing ones, and/or modify the user's name, password, and/or level.

Setup Page



Setting procedures(1-2)		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"PASSWORD"** icon.	1. Press▲▼◄► button to enter the Password SETUP option.
STEP 2	The **"Password Setup"** menu will be displayed.	2. Press **"Enter"** button.
STEP 3	Right click for EXIT.	3. Press **"ESC"** button for exit.

There are three default password levels in the system, including **Administrator** (highest), **Supervisor**, and **Operator** (lowest). The Operator can operate live video display, the Supervisor live video display, image playback and archive, and the Administrator everything. Beside the default password levels, the user can also set "Customized" user level as described in the following paragraphs. The system allows up to 18 user accounts.

There is one factory-preset login name/password **aa/11** at **Administrator** level. The user can use it to login the system for the first time.

All Functions		
Functions	**Description**	**Button/Remote control**
MODE	Select/Deselect as default. An **asterisk (*)** will be shown preceding the number for the default login user.	Press **"Mode"** buttons to return to default setting. **(Mouse: Left click)**
ESC	For return to previous page or exit.	Press **"ESC"** button and then press **"Enter"**buttonto save password. **(Mouse: Left click)**
Guest Level	The access level (**Administrator**, **Supervisor**, **Operator**, or -) without login the system.	Press **+/-** buttons to change the level.
Auto logout	If there's no user's operation in 1 minute to 24 hours, or not ("-"), it will logout automatically.	Press **+/-** buttons to change the value.

Login Name	To set the login name(by text)	please refer to text input, below.
Password	For changing password	please refer to text input, below.
Level	the password level (**Administrator**, **Supervisor**, or **Operator**)	Press **+/-** buttons to change the level
Adv.	Press **ENTER** **(Mouse: Left click)** to call up Advanced User Setup as shown below.	

Text input:

In the **"abc"** button, there's 3 types of functions:

abc = No capital letters

ABC = All capital letters

Code

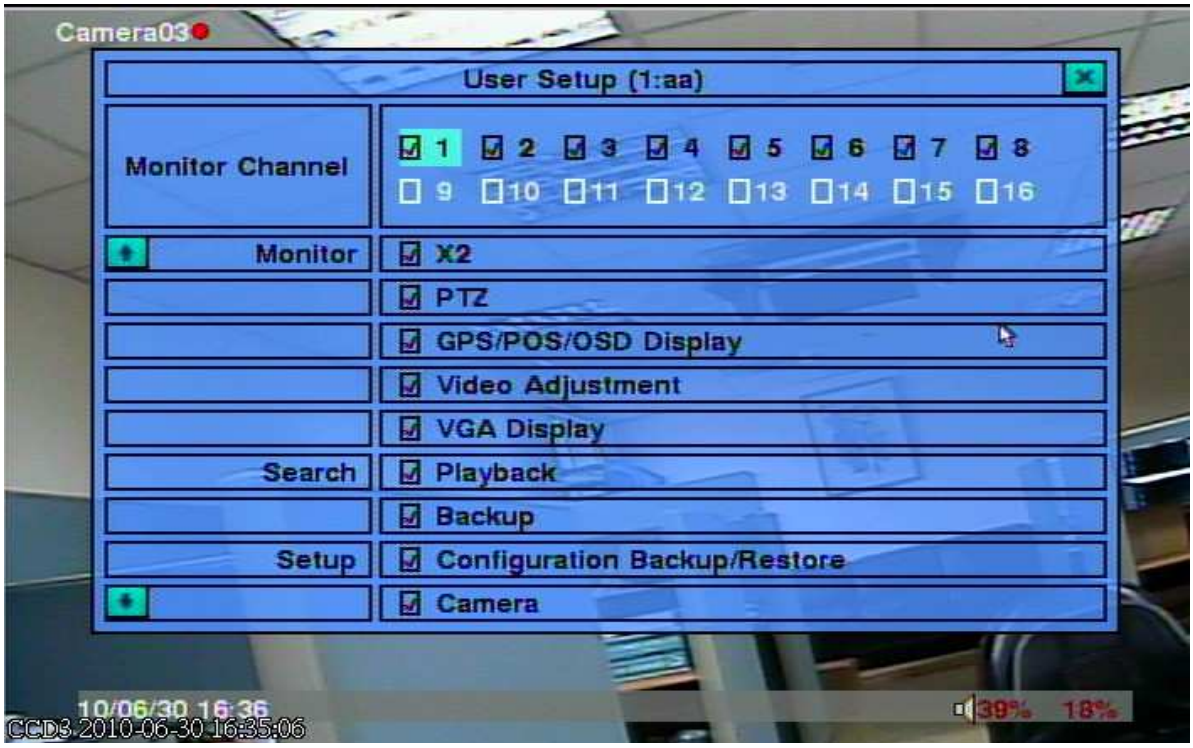
For remote control:

Press **mark** to bring up a list of punctuation marks and special characters.	The highlighted character in the list shows the selected one.	Press ▲▼◄► button to change the selection.

If you make a mistake, press **BS** to remove the character to the left of the cursor, or press **DEL** to delete the character at the current cursor position.

In text editing mode press **ENTER** to exit and save changes, press **ESC** to exit without making changes.

3.1.14.1.ADV-User Setup:



Setting procedures(3)		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"Adv option"** of Setup Display menu.	1. Press▲▼◄► button to enter the Adv-User Setup option.
STEP 2	The **"User-Setup"** menu will be displayed.	2. Press **"Enter"** button.
STEP 3	Right click for EXIT.	3. Press **"ESC"** button for exit.

All Functions		
Functions	**Description**	**Button/Remote control**
Monitor Channel 1-16	The user can only monitor those channels **"checked"**	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
X2	To enable the user to do X2 operation for live/playback video if **"checked"**.	Press"**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.

PTZ	To enable the user to do PTZ operation if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
OSD Display	To enable the user to change OSD Display if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Volume	To enable the user to change volume if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Video Adjustment	To enable the user to do video adjustment operation if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
VGA Display	To enable the user to change VGA settings if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Playback	To enable the user to playback video/audio if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item
Backup	To enable the user to backup video/audio if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Configuration Backup/Restore	To enable the user to backup/restore configurations if **"checked**".	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Setup Camera	To enable the user to do Camera Setup if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Setup Alarm	To enable the user to do Alarm Setup if **"checked**".	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Setup SEQ Display	To enable the user to do SEQ Display Setup if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Setup Scheduled Record	To enable the user to do Scheduled Record Setup if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Setup HDD	To enable the user to do HDD Setup if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to

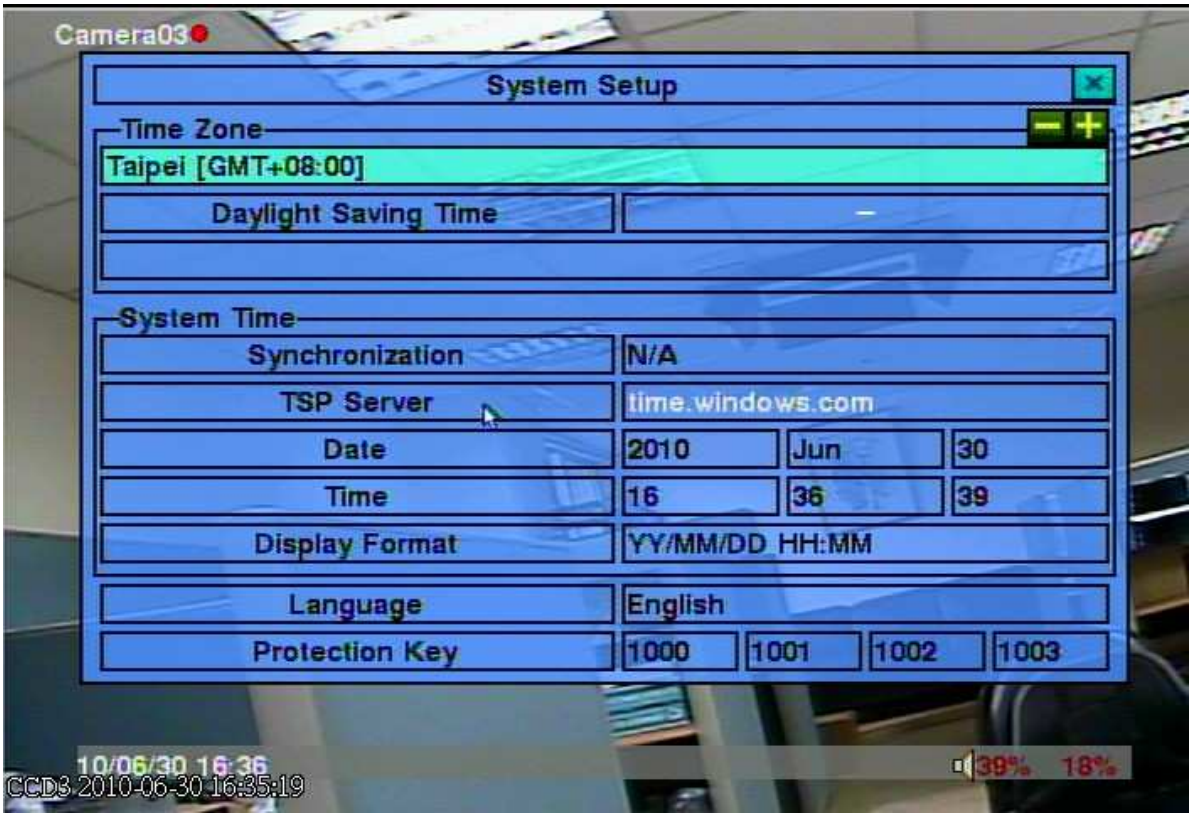
		check/uncheck this item.
Setup Password	To enable the user to do Password Setup if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Setup System	To enable the user to do System Setup if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Setup RS-232/422/485	To enable the user to do RS-232/422/485 Setup if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Setup Network	To enable the user to do Network Setup if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Setup Factory Defaults	To enable the user to restore factory defaults to all setup related configurations if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.
Software Upgrade	To enable the user to upgrade DVR software if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item
Shutdown	To enable the user to shutdown the DVR if **"checked"**.	Press "**ENTER"** or **+/- (Mouse: Left click)** to check/uncheck this item.

3.1.15.System setup(Time zone)

Description:

The System Setup allows the administrator to set the system time, time zone, time synchronization, language, etc.

Setup Page



Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"System"** icon.	1. Press▲▼◄► button to enter the System SETUP option.
STEP 2	The **"System Setup"** menu will be displayed.	2. Press **"Enter"** button .
STEP 3	Right click for EXIT.	3. Press **"ESC"** button for exit.

All Functions		
Functions	**Description**	**Button/Remote control**
Time Zone	To select the time zone for the system.	Press +/- button to adjust the time zone. (Mouse: Left click)
Daylight Saving Time	The default value is set by selecting a different time zone, but the user can change the time zone and use the daytime saving.	Press"**ENTER"**or **+/-** to check/uncheck this item (Mouse: Left click)
Synchronization	Time synchronized with TSP Server.	Press"**ENTER"**or **+/-** to check/uncheck this item. (Mouse: Left click).
TSP Server	TSP (Time Synchronization Protocol) server name if Time Synchronization is enabled.	The system will try to do time synchronization with the specified TSP server at the system preset interval.
Date	System Date.	Press **+/-** buttons to modify each of these items. (Mouse: Left click).
Time	System time.	Press **+/-** buttons to modify each of these items. (Mouse: Left click).
Display Format	Format used for the system time displayed on the lower-left	Press **+/-** buttons to select the desired

	corner of the main screen.	format. (Mouse: Left click).
Language	The languages supported include: **English**, **Russian**, **Simplified Chinese**, **Spanish**, **Traditional Chinese**, **Polish**, **Turkish**, etc.	Press **+/-** buttons to select the language for the system.
Protection Key	The protection key for the remote access of the system.	please refer to next page, text input.

This protection key will be used for authentication when any remote station wants to connect with the system from Ethernet interface, either LAN or internet. So, the same protection key must be entered to install the remote software if it is to be used to access the system.

Text input:

In the “abc” button, there’s 3 types of functions:

abc = No capital letters

ABC = All capital letters

Code

For remote control:

Press **mark** to bring up a list of punctuation marks and special characters.	The highlighted character in the list shows the selected one.	Press ▲▼◄► button to change the selection.

If you make a mistake, press **BS** to remove the character to the left of the cursor, or press **DEL** to delete the character at the current cursor position.

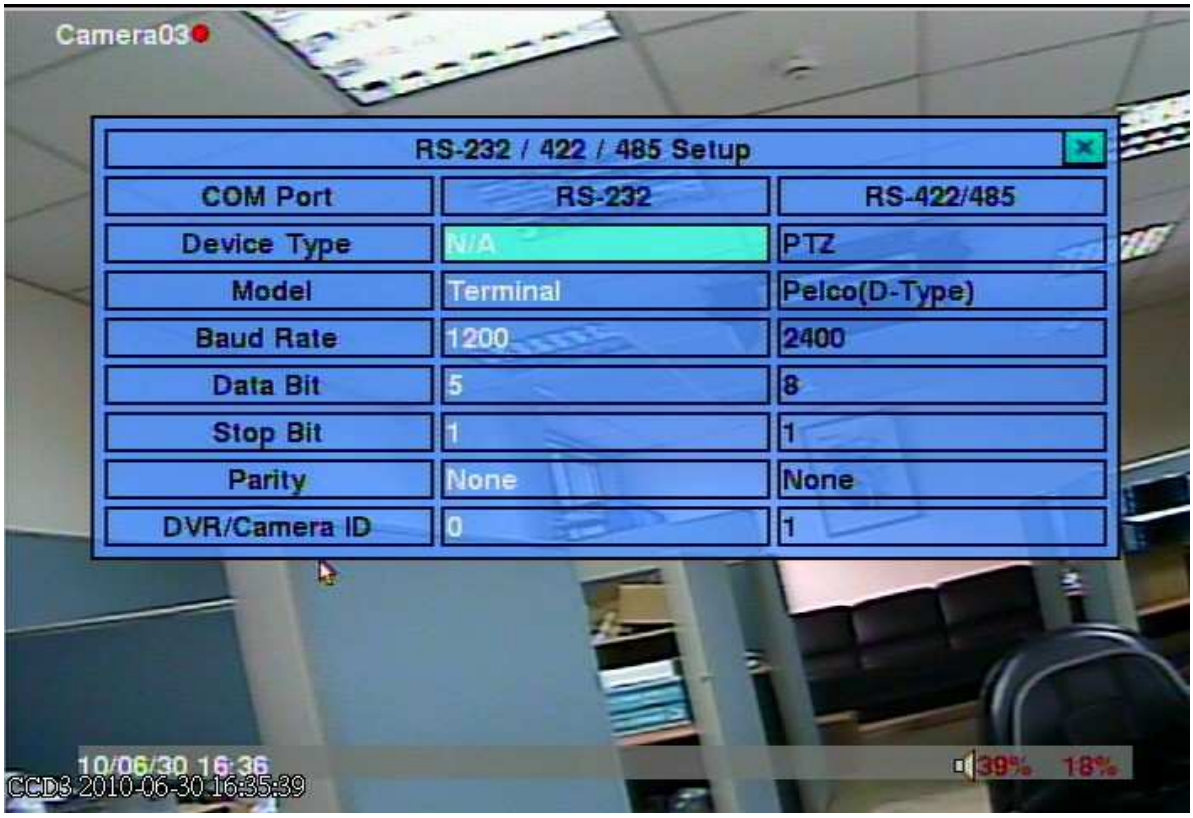
In text editing mode press **ENTER** to exit and save changes, press **ESC** to exit without making changes.

3.1.16. RS232/422/485

Description:

The RS-232/422/485 Setup allows the administrator to setup RS-232 control port (NOT available for the model), and RS422 or RS-485 control port.

Setup Page



Entering procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Left Click**"RS-232/422/485"** icon.	1. Press▲▼◄► button to change the highlighted option.
STEP 2	The **"RS-232/422/485"** Setup menu will be displayed.	2. Press **"Enter"** button.
STEP 3	Right click for EXIT.	3. Press **"ESC"** button for exit.

All Functions		
Functions	**Description**	**Button/Remote control**
Device Type	For selecting the type of PTZ. (**PTZ**, **Keyboard**, **PTZ+Keyboard** or **N/A** (Not Available).	Press **+/-** buttons to change the type.
Model	PTZ model **(for PTZ and PTZ+Keyboard)**, Keyboard model of the connected devices..	please refer to the note , below:
Baud Rate	Baud Rate	Press **+/-** buttons to change the value
Data Bit	Data Bit	Press **+/-** buttons to change the value.
Stop Bit	Stop bit	Press **+/-** buttons to change the value.
Parity	(**Odd**, **Even**, or **None**)	Press **+/-** buttons to change the value.
DVR/Camera ID	For **PTZ/Keyboard** => the device ID for this digital video/audio recorder, and it must not conflict with the other devices connected in the same control port.	Press **+/-** buttons to change the ID.

The PTZ models supported include **Pelco D protocol Dome**, **SamSung SCC-641P**, **Kalatel Cyber Dome**, **PIH-series**, **Dynacolor**, **Bosch AutoDome**, **Video Trek**, etc. The Keyboard models supported include **Terminal** (EX. VT-100) and **Control Protocol**. For Terminal type, please use the corresponding ASCII characters for **code** as described in Appendix.

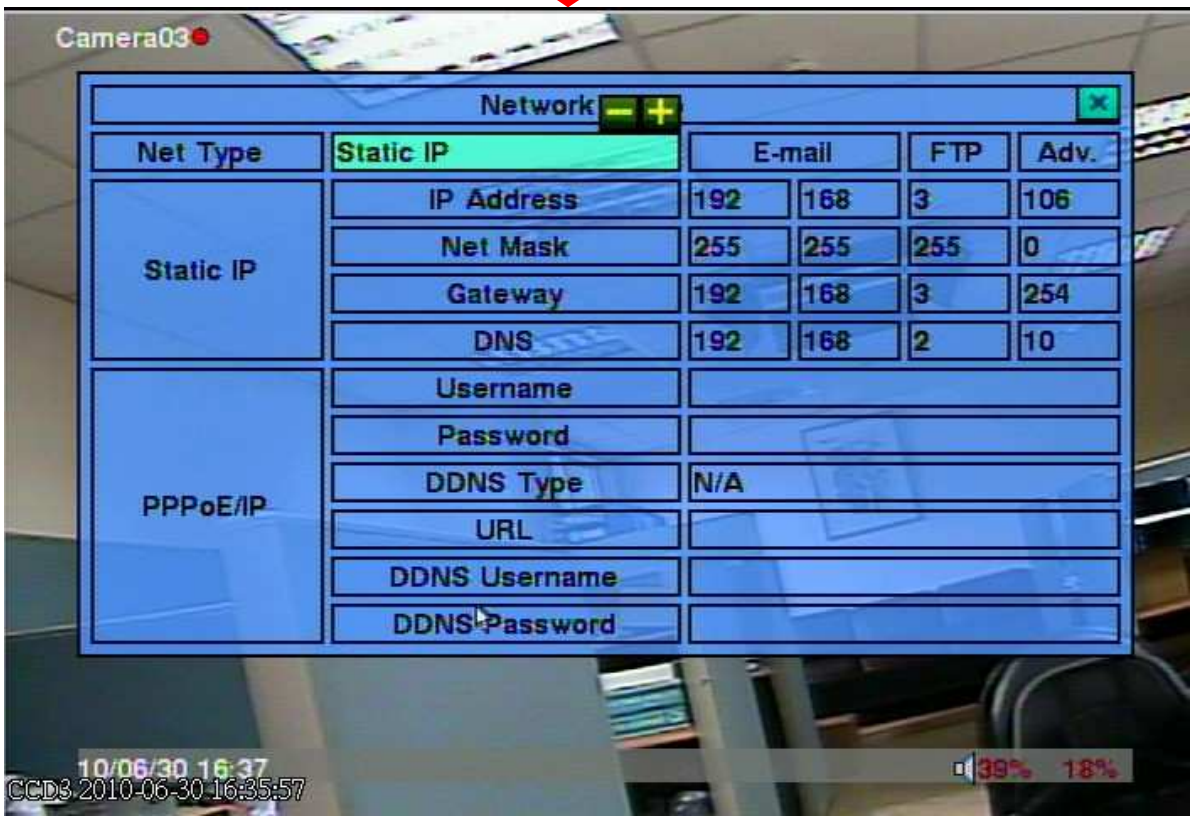
if PTZ+Keyboard is selected for Device Type, the Keyboard model is always Control Protocol, and the other settings (Baud Rate, Data Bit, Stop Bit, and Parity) are the same as the PTZ Model selected. Please also make sure that the installer must be sure that the Keyboard Control Protocol and the PTZ Protocol won't conflict with each other.

3.1.17 Network

Description:

The Network Setup allows the administrator to setup all Ethernet network related parameters.

Setup Page



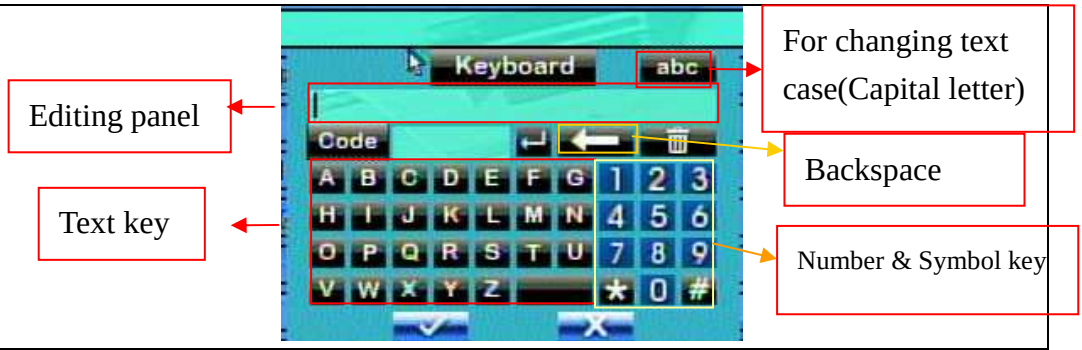
Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"Network"** icon.	1. Press▲▼◄► button to change the highlighted option.
STEP 2	The **"Network Setup"** menu will be displayed.	2. Press **"Enter"** button.
STEP 3	Right click for EXIT.	3. Press**"ESC**"button for exit.

All Functions		
Functions	**Description**	**Button/Remote control**
Net Type	**Static IP, PPPoE, or DHCP**. DHCP can only be used for intranet (LAN) access(When the http port is closed), while Static IP and PPPoE can be used for both internet & intranet access.	Press **+/-** buttons to change the Net Type.
IP Address	Ethernet IP address for the system.	To get the static IP address, please contact your local ISP (Internet Service Provider).
Net Mask	Net Mask for the IP address.(enter the IP by text)	please refer to the text input for more detailed , below.
Gateway	Gateway IP address for the system. (enter the IP by text)	please refer to the text input for more detailed , below.
DNS	DNS (Domain Name Server) IP address for the system(enter the IP by text).	please refer to the text input for more detailed , below.
Username	PPPoE username for the system if PPPoE is used.	please refer to the text input for more detailed , below.

Password	PPPoE password for the system if PPPoE is used.	please refer to the text input for more detailed , below.
DDNS Type	Dynamic, Static, Custom DDNS (Dynamic Domain Name Server) type, etc. Please contact your local DDNS Service Provider to get the DDNS URL, username, and password.	Press **+/-** buttons to change this item.
URL	the URL (Uniform Resource Locators) for the system if PPPoE is used.	please refer to the text input for more detailed , below.
DDNS Username	DDNS username for the system if PPPoE **or Static IP** is used.	please refer to the text input for more detailed , below.
DDNS Password	DDNS password for the system if PPPoE **or Static IP** is used.	please refer to the text input for more detailed , below.
E-mail	For Setting E-mail	Press"**ENTER"(Mouse: Left click)** to call up E-mail Setup. please refer to next page E-mail setup.
FTP	For Setting FTP	press"**ENTER"(Mouse: Left click)** to call up FTP Setup. E-mail Setup. please refer to next page FTP setup.
Adv.	To call up Advanced Network Setup	Press"**ENTER"(Mouse: Left click)** to call up Advanced Network Setup.

		please refer to next page Advanced network setup.

If DDNS Type is Free DNS, the URL must be appended with ",hash", where hash is extracted from the grab URL batch file that is downloaded from freedns.afraid.org.



In the **"abc"** button, there's 3 types of functions:

abc = No capital letters

ABC = All capital letters

Code

For remote control:

Press **mark** to bring up a list of punctuation marks and special characters.	The highlighted character in the list shows the selected one.	Press ▲▼◄► button to change the selection.

If you make a mistake, press **BS** to remove the character to the left of the cursor, or press **DEL** to delete the character at the current cursor position.

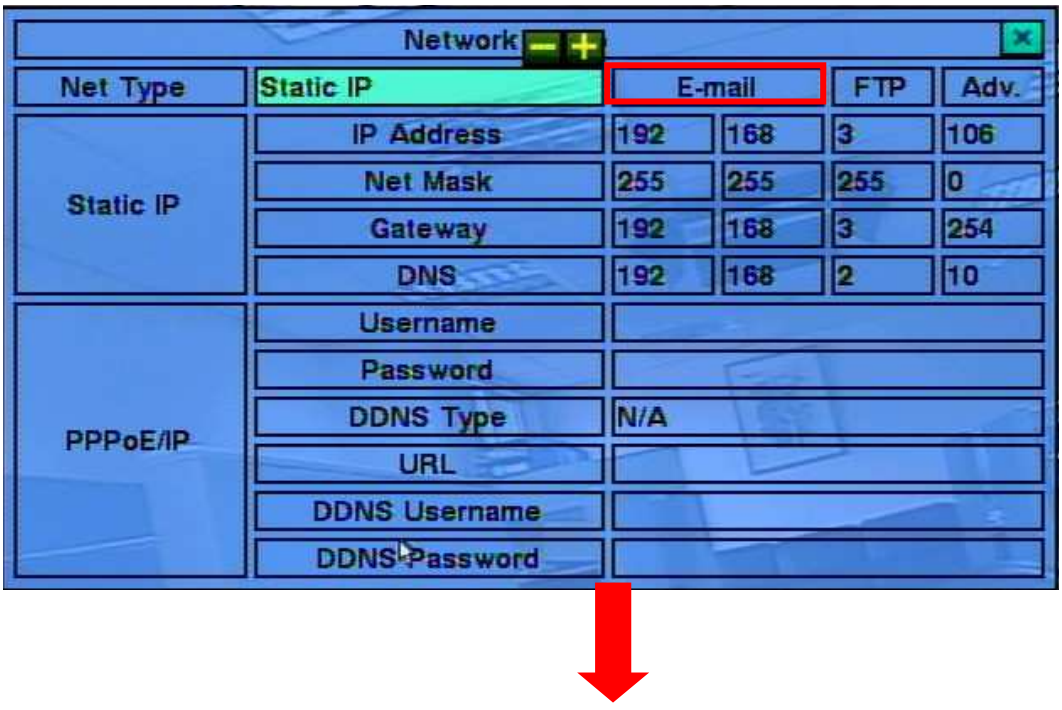
In text editing mode press **ENTER** to exit and save changes, press **ESC** to exit without making changes.

3.1.18. E-mail setup:

Description:

The E-mail Setup allows the administrator to set e-mail related parameters. When an event occurs and E-mail is enabled for the corresponding action, an e-mail will be sent based on the parameters set here.

Setup Page



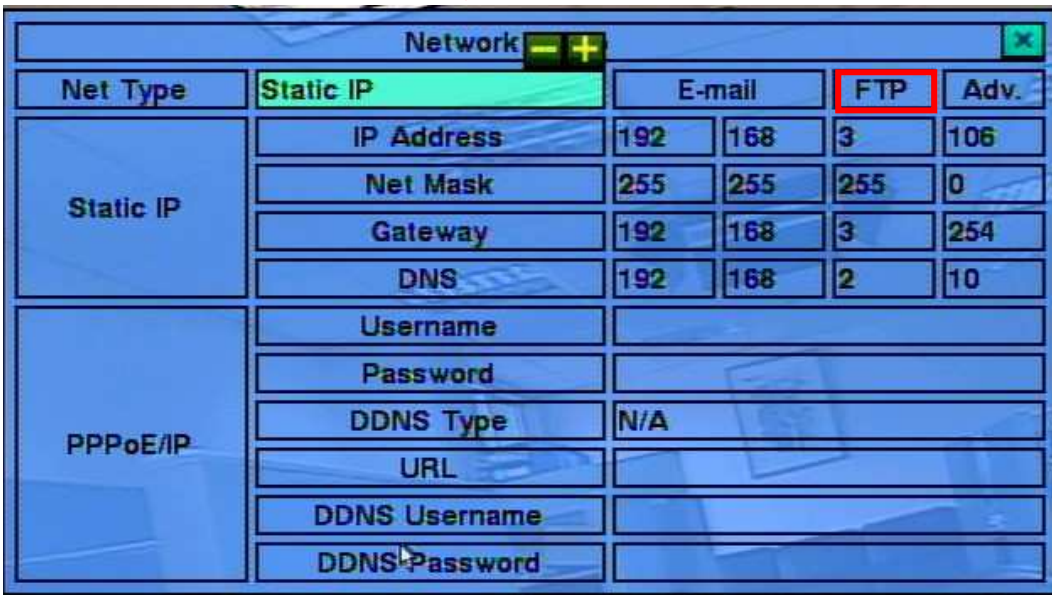
Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"E-mail Setup"** option of Network Setup Display menu.	1. Press▲▼◄► button to change into E-mail option.
STEP 2	The **"E-mail Setup"** menu will be displayed.	2. Press **"Enter"** button.
STEP 3	Right click for EXIT.	3. Press **"ESC"** button for exit.

All Functions		
Functions	**Description**	**Button/Remote control**
SMTP Server	SMTP mail server name.	please refer to the text input above for more detailed.
SMTP Port	The SMTP port for e-mail transmission.	please refer to the text input above for more detailed.
Authentication	Whether the SMTP mail server requires authentication.	Press"**ENTER**"or **+/-** to check/uncheck this item.

Username	Username if the SMTP mail server requires authentication.	please refer to the text input above for more detailed.
Password	Password if the SMTP mail server requires authentication.	please refer to the text input above for more detailed.
Mail From	The e-mail address of this DVR unit, **i.e.** the sender of the e-mails originated from the triggered events.	please refer to the text input above for more detailed.
Mail To #1-5	the receivers' e-mail addresses. The system can send the e-mails originated from the triggered events to up to **5 different receivers.**	please refer to the text input above for more detailed.
Attachment	Attached picture for the e-mail sent. (The value could be (N/A, Original picture, QCIF picture)).	Press **+/-** buttons to change this item.

3.1.18.1. FTP Setup:

Setup Page

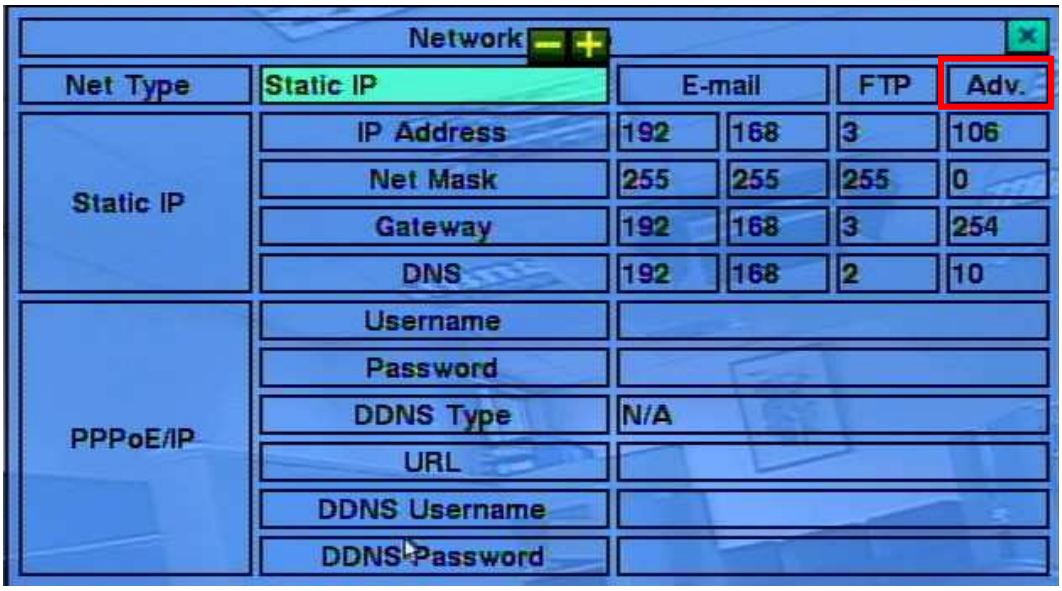


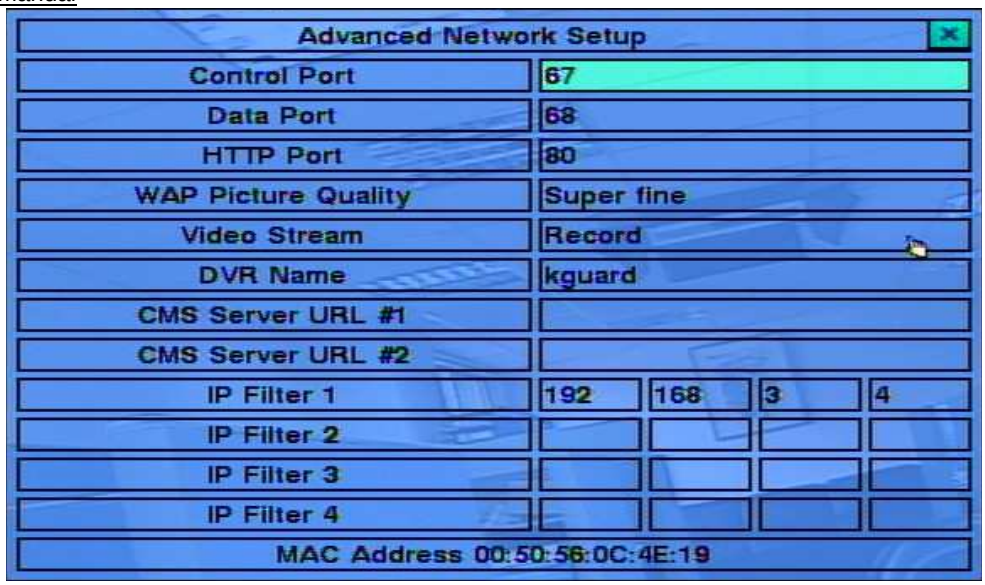
Setting procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"Network"** icon.	1. Press▲▼◄► button to change the highlighted option.
STEP 2	The **"Network Setup"** menu will be displayed, then click on **"FTP"** option.	2. Press **"Enter"** button.
STEP 3	Right click for EXIT.	3. Press **"ESC"** button for exit.

All Functions		
Functions	**Description**	**Button/Remote control**
FTP Server	FTP server web/IP address	please refer to the text input for more detailed , previous page.
FTP Port	FTP Port(The default value is **21)**	please refer to the text input for more detailed , previous page.
Username	Username for this DVR unit in the FTP server.	please refer to the text input for more detailed , previous page.
Password	Password for this DVR unit in the FTP server.	please refer to the text input for more detailed , previous page
Prefix Of Filename	The prefix of the filenames for the files sent to the FTP server. If it's empty, the filenames will be "cam..."; if not, the filenames will be "Prefix-cam..".	please refer to the text input for more detailed , previous page.

3.1.18.2. Advanced Network Setup:

Setup Page





Make sure that the user already familiar with network administration, or DO NOT modify the items in this dialog.

Entering procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"Network"** icon.	1. Press▲▼◄► button to change the highlighted option.
STEP 2	The **"Network Setup"** menu will be displayed, then click on **"Adv"** option.	2. Press **"Enter"** button.
STEP 3	Right click for EXIT.	3. Press **"ESC"** button for exit.

All Functions		
Functions	**Description**	**Button/Remote control**
Control Port	For remote access. (The default value is **67)**	please refer to the text input for more detailed , previous page.
Data Port	For remote access. (The default value is **68)**	please refer to the text input for more detailed , previous page.
HTTP Port	For remote access. (The default value is **80**)	please refer to the text input for more

		detailed , previous page.
WAP Picture Quality	The WAP picture quality if WAP access is supported for the DVR.	Press **+/-** buttons to change the value
Video Stream	Network live video stream is the same as **"Record"** stream, or the others for dual streaming. If dual streaming is used, the total system recording rate will be lowered. The default value is **"Record"**, which means that dual streaming is not used. To use dual streaming in I.E., the user must select **"Extra"** in **"Video Stream"** in the **"Device List"** in remote PC.	Press **+/-** buttons to change the value.
IP Filter #1-4 (for specified the user to access the internet)	The IP filters #1-4 for remote access. The default value of IP filter is the symbol : **asterisk** (*). If you put this symbol on IP filter, all user can access the Internet without blocked. **If the Control Port or Data Port is not available or accessible during remote access, the system will reset the ports to their default values, i.e. 67/68.**	

3.1.19.Factroy Default

Setup Page

To reset all setting back to factory setting.

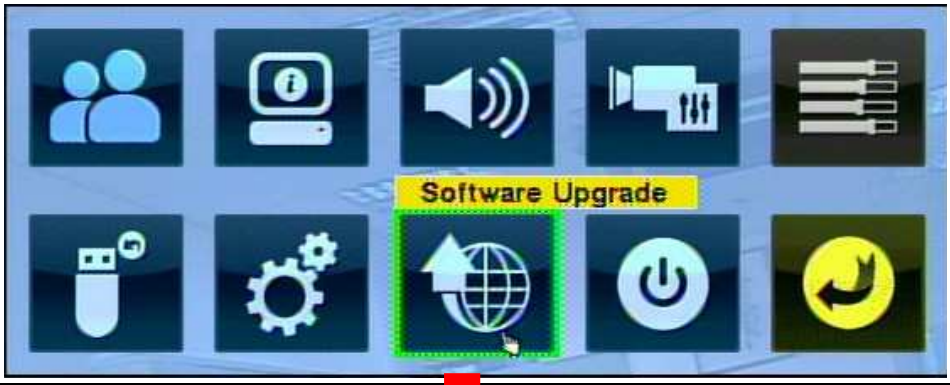
3.1.20. ESC

Setup Page

Exit or return back to main page of OSD menu.

3.1.21. Software Upgrade (Administrator)

MAIN PAGE(OSD Display MENU)



Entering procedures		
STEPS	**MOUSE**	**Button/Remote control**
STEP 1	Click on **"Software upgrade"** icon.	1. Press▲▼◄► button to change the highlighted option.
STEP 2	The **"Software upgrade "** Setup menu will be displayed.	2. Press **"Enter"** button.
STEP 3	Right click for EXIT and then click on **"ESC"** Icon for EXIT.	3. Press **"ESC"** button for exit.

All Functions		
Functions	**Description**	**Button/Remote control**
Backup Device	For checking the backup devices.	Press **ENTER (Mouse: Left click)** to call up Backup Device dialog (if there's no backup device connected).
Disc Storage	To select the disc storage to upgrade.	Press **+/-** buttons to select the available storage.
Upgrade File	For displaying the location of upgrade files.	Pess"**ENTER"(Mouse: Left click)** to start the upgrade process when the highlighted file is a correct upgrade file. Press "**ENTER"** Button to confirm.

After the software is upgraded, the system will restart immediately. The split window display will be shown after restart, please wait a moment.

Please contact your sales person or local dealer, before upgrade the software.

3.1.22.System Shutdown (Administrator)

MAIN PAGE(OSD Display MENU)

1. Press ▲▼◄► to change the highlighted option to **Shutdown**
2. Press”**ENTER”**button.
3. The user may power off the system safely when the power-off message is shown.

OSD DISPLAY MENU(Backup Device)

To exit the OSD display menu.

Digital Zoom

The system supports X2/X4 Digital Zoom function.

To use this function, press X2 **button** (Mouse:) **in full screen display to enter Digital Zoom mode. There will be a zoom window shown in the video window as shown. The zoom window (a) will always be shown at zoom factor X1, (b) can be shown or hidden at zoom factor X2, and (c) will never be shown at zoom factor X4.**

【Chapter 4. PTZ Control】

The digital video/audio recorder supports a variety of PTZ cameras. The user can easily control the PTZ cameras through the operations described in this Chapter if those PTZ cameras have been connected and setup correctly. Please refer to Pre-camera to set the PTZ ID of each PTZ camera, and RS-232/422//485 Setup to setup the control port.

The functions of basic operation menu		
Picture	**Functions**	**Description**
	Numeric	For selecting camera.
		For EXIT or returning.
▲▼	**MODE**	Press these buttons to tilt the camera up/down.
◄►		Press these buttons to pan the camera left/right.
	ZOOM (🔍) +/-	Press these buttons to zoom in/out the camera.
	PTZ	**For entering PTZ mode, if the focus camera is a PTZ camera**

NEXT	**NEXT**	Press this button for the next miscellaneous function. the miscellaneous functions include Focus, Iris, Auto PAN, SEQ, Preset, and Pan Speed. And the active one will be shown on the lower right corner of the screen. The miscellaneous function specific operations are described in the following table.
	GOTO	Press this button to move the camera to the preset position.

If a camera is also a PTZ camera, there will be an asterisk (*) preceding its title in its video window in split-window display. Please press **PTZ** button **(Mouse:** **)** to enter PTZ control mode if the focus camera is a PTZ camera. The **asterisk** (*) will be **blinked** to indicate that the camera is now in PTZ control mode.

In PTZ control mode, the user's operations can be divided into general operations and miscellaneous function specific operations, and are described as the followings:

The **keypad hint(GOTO)** will be shown. Press numeric buttons **0-9** to enter the number of the preset position to move the camera to. The range of the preset positions is 00-99.

The miscellaneous functions(Next),include Focus, Iris, Auto PAN, SEQ, Preset, and Pan Speed. And the active one will be shown on the lower right corner of the screen. The miscellaneous function specific operations are described in the following table.

【Chapter 5.Search/Playback/Archive】

(Administrator, Supervisor)

5.1 Description:

In basic operation menu ,press ”**SEARCH”** button **(Mouse:)** to call up Search Menu display as shown:

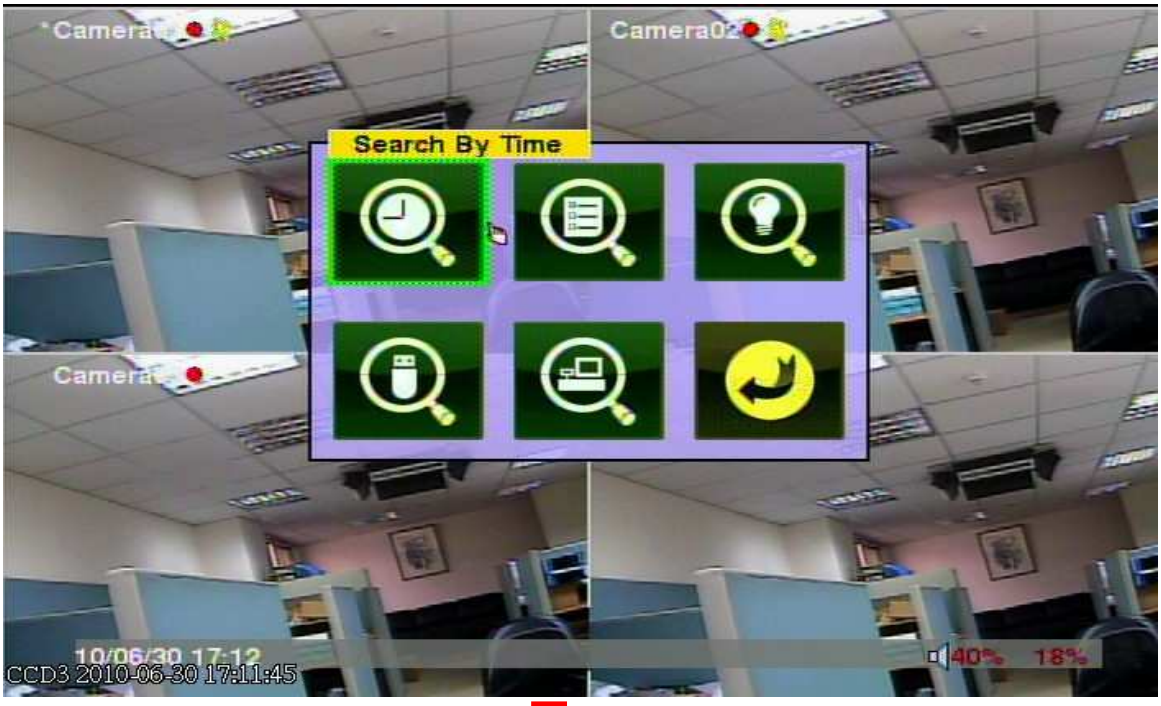
There are five ways to search the recorded video/audio for playback			
NO.	Symbol	Buttons	Functions
1	Search by time	▲▼◄►	Press these buttons to change the highlighted item.
2	Search by event	**ENTER (Mouse: Left click)**	Press this button to enter the corresponding Search display of the highlighted item
3	**Smart search**		
4	Search archived files	**ESC (Mouse: Right Click)**	Press this button to escape from Search Menu display, and return to basic operation menu.

The Search displays and their operations are described in the following sections, followed by the playback operations of the searched video/audio.

5.2.Search By Time

Description:

The Status field will show the 'Recorded from' time based on the selected Video/Audio before searching - alarm partition if any of Alarm, Motion, or Video Loss, is checked, and normal partition if Normal is checked.



Functions	Description
Search Time – (**Year**, **Month**, **Date**, **Hour**, **Minute**)	1. For the recorded video/audio. 2. The playback (or backup) will start from the time entered here when the user press the playback buttons (or Copy button) later. 3. Press **+/-** buttons to modify each item.
Video/Audio – (**Alarm**, **Motion**, **Video Loss**, **Normal**).	1. Check the types of the recorded video/audio you want to search for playback. 2.Press"**ENTER"** or **+/-** to check/uncheck each item.

Buttons	Functions
▲▼ (Mouse: Left click)	Press these buttons to select the items.
ESC (Mouse: Right Click)	Press this button to escape from this screen, and return to split-window display.
Play Button (▶/Ⅱ) (Mouse: Left click)	Press this button to start playing the recorded video/audio with the selected search time and video/audio type. The search result will be shown on the bottom of this dialog if it failed. If there's no camera in playback mode, all the cameras in the current split window will be set to playback mode.
Copy Button ( ) (Mouse: Left click)	Press this button to backup (copy) the selected type of recorded video/audio starting from the Search Time (described below) in the HDD to the connected backup device without playback. This kind of backup is performed in the background, and the user can still do almost all the operations.

<table>
<tr><th colspan="3">Playback/Archive</th></tr>
<tr><td>Buttons
(Basic operation menu)</td><td>Functions</td><td>Description</td></tr>
<tr><td>MENU (Mouse:)</td><td>At playback, press this button for the snapshot of the playback windows.</td><td>A confirmation dialog will be shown, press”ENTER” button to snapshot and press “ESC” (Mouse: Right Click) button to exit without snapshot.
The snapshot picture will be saved in the directory /Snapshot in the connected backup device.</td></tr>
<tr><td>MODE(Mouse:)</td><td>To change circularly the live/playback mode for the focus window and the other windows that form a rectangle on the screen.</td><td>The video windows for the windows in playback mode are grayed, while those in live mode display live video.</td></tr>
<tr><td>▶/Ⅱ
(Mouse:)</td><td>Play/Pause</td><td>Press this button to play the recorded video/audio searched at forward speed 1X, or pause the playback.</td></tr>
<tr><td colspan="3">If the playback is paused, press this button again to resume playing.
Note that audio can only be played at forward speed 1X.</td></tr>
<tr><td>■
(Mouse:)</td><td>Stop</td><td>Press this button to stop playing the recorded video/audio.</td></tr>
<tr><td colspan="3">If the user press ▶/Ⅱ button later, the playback will start from the beginning.</td></tr>
<tr><td>▶▶/▶:Remote controller
▶:Front panel
(Mouse:)</td><td>Fast Forward</td><td rowspan="2">Press this button for fast/slow forward playback.</td></tr>
<tr><td>SEQ
(Mouse:)</td><td>Slow Forward</td></tr>
</table>

=> (Mouse: to toggle)		
Each time this button is pressed, the forward playback speed will become faster/slower, from 2X, 4X, 8X, up to 64/16X, and then back to 2X.		
◀◀ /◀:remote controller, ◀ : front panel ◀◀ (Mouse:)	**Fast Backward**	**Press this button for fast/slow backward playback.**
MODE (Mouse:) => (Mouse: to toggle)	**Slow Backward**	**Press this button for fast/slow backward playback.**
Each time this button is pressed, the backward playback speed will become faster/slower, from 2X, 4X, 8X, up to 64/16X, and then back to 2X.		
▶I/▼: remote controller, ▼ on front panel (Mouse:)	**Single Step(Frame by Frame)**	**Press this button to play the recorded images frame by frame.**

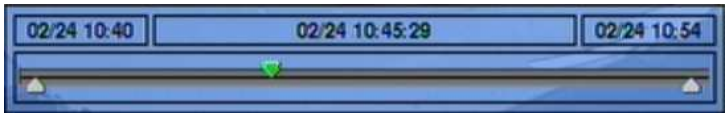
Copy/Backup

Buttons	Functions	Description
Copy ( ) **(Mouse:)**	To copy or stop copying the playback video/audio to the storage device connected to the USB port.	The video windows for the windows in playback mode are grayed, while those in live mode display live video.
MENU (Mouse:)	At playback, press this button for the snapshot of the playback windows. A confirmation dialog will be shown, press"**ENTER**" button to snapshot, or press "**ESC**" **(Mouse: Right Click)** button to exit without snapshot.	The snapshot picture will be saved in the directory /Snapshot in the connected backup device.
▲▼◄► **(Mouse: Left click)**	To select the items.	1.Select the displaying Position, Background, Rows, and number of Characters on the screen, 2.Press"**ENTER**"to display 3.Press"**ENTER**"again to not display it.

Copy Button ( ) **(Mouse: Left click)**	To start backup (copy) or apply the revised settings if it's copying, and return to the previous display.	There will be a **Copy** icon on the lower-right corner indicating that the selected video/audio is being archived to the storage device.
*For DVD disc, the files won't be written to the disc until the storage size reaches 1 GB or the user stop copying. Writing to the disc may take more than 1 minute for every 100 MB (depending on the disc type).		
Stop ( ) (Mouse: Left click)	To cancel, and return to the previous display.	The Copy icon will be disappeared
ESC (Mouse: Right Click)	To cancel, and return to the previous display.	Press this button for fast/slow forward playback.
Backup Device	The backup device connected to the system.	*Press**"ENTER"**(Mouse: Left click) on the left button to call up Backup Device dialog if there's no backup device connected. *Press **+/-** buttons on the right selection to select the connected device
Backup Speed	1-9, with 1 the lowest speed, 9 the highest speed.	Press +/- buttons to select the value.
Directory	To store the archived files.	
Cameras	the video/audio of the cameras to be archived.	Press **"ENTER"** or +/- to select/deselect each of the selectable cameras.
End Time– **(**Year**,** Month**,** Date**,** Hour**,** Minute**)**	For setting the end time of backup video/audio.	*The files will be backup from the start time to the end time when the user press **"COPY"** button (Mouse: Left click) to start copying. *Press **+/-** buttons to modify each item.

Search Button ( )

Press this button to display the playback slider bar as shown below.



The left-most is the start time and its slider, the right-most is the end time and its slider, and the middle is the current playback time and its slider. Following is a brief description for the operations in playback slider bar:

■ **▲▼ (Mouse: Left click)**

To select the focus slider.

■ **◄► repeatedly & ENTER Button (Mouse: Left click and drag)**

Press ◄► repeatedly and then press **ENTER** to move the focus slider to a new time.

The whole playback slider bar will be updated accordingly.

■ **Playback Buttons (▶/‖, ■, ▶▶, ◀◀, ▶‖)**

These playback buttons are still operational as described above.

■ **ESC (Mouse: Right Click)**

For hidding the playback slider bar.

For each camera and each backup, a batch file will be generated as well as the backup files. A directory "/SelfPlayer" will also be generated if it's not existing in the backup storage device.

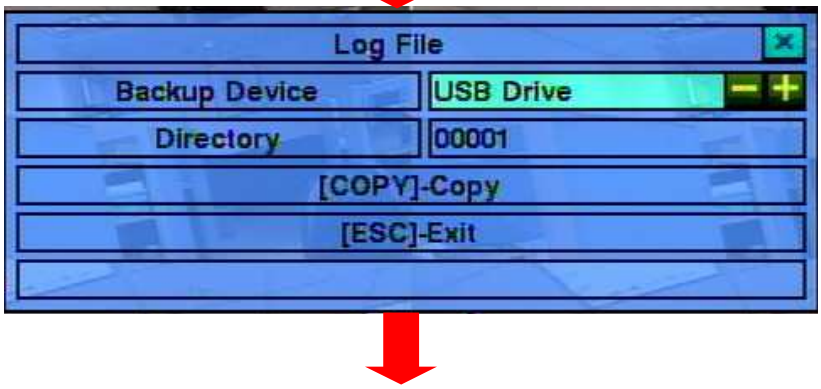
The user can use the batch file to self-playback the corresponding backup files in a PC.

If the PC has not been installed with the required player components, those components will be installed by running the batch file except Windows Vista.

For Windows Vista, please run /SelfPlayer/SelfPlayerInstall.exe manually to install the required player components.

To copy self-playback files, please copy the batch file and the backup files to the destination directory, and copy the whole directory "/SelfPlayer" to the root directory of the destination device.

5.3 Search By Event / Log Display



Special functions	
Functions	**Description**
Event Type	*The type of the events (**Record**, **Alarm**, **Motion**, **Video Loss**, **System**) to be shown in the log list. *The Event Type "System" includes all system related events, such as power on/off, and will not trigger recording. *Press "**ENTER"** button or **+/-** to check/uncheck the event type for the log list.
Source ID	*The source which triggered the event. *For Alarm, it's the alarm input number; for Motion and Video Loss, it's the camera number. *It's used to filter the events to be shown in the log list. *Press "**ENTER"** button or **+/-** to check/uncheck each item. ***You may check/uncheck "All" for faster operation.**
Source ID	*The source which triggered the event. For Alarm, it's the alarm input number; for Motion and Video Loss, it's the camera number. *It's used to filter the events to be shown in the log list. *Press "**ENTER"** button or +/- to check/uncheck each item.
Log List	The event logs according to the Event Type and Source ID selected. The user may: (1)Press "**ENTER"** **(Mouse: Left click)** to select/deselect the highlighted log in this list, (multiple logs can be selected in this way) (2)Press "**Play Buttons"** **(** ▶/Ⅱ , ▶▶ **)(Mouse: Left click)**to playback all the selected logs, or (3)Press "**Copy Button"** **(** **)(Mouse: Left click)** to **backup (copy)** all the selected recorded video/audio to the connected backup device **without playback**

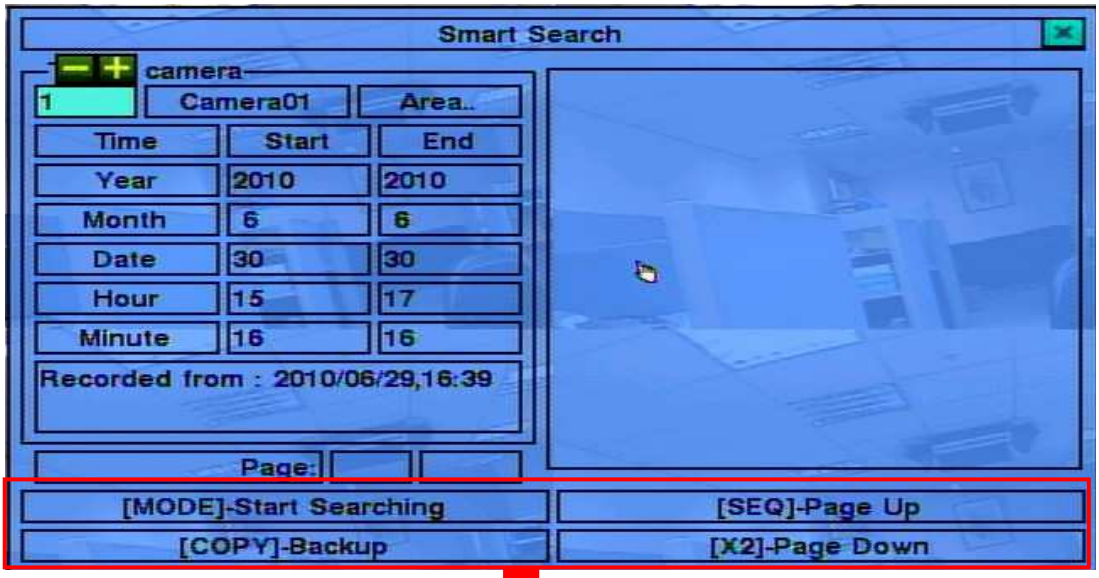
There are four different types of event logs, including Alarm, Motion, Video Loss, and System.
And the system can store up to **1000** event logs.

Buttons(Split windows)	Functions
MODE => Refresh **(Mouse: Left click)**	Press this button to refresh the log display.
CALL => Page Down **(Mouse: Left click)**	Press **SEQ/CALL** to Page Up/Down the Log display.
Numeric (ENTER) (Mouse: Left	Press these buttons to select the

click in the page number shown)	display page of the event logs, the log list will also be updated. (Please note that there are only 1/2/3/4 available for the keypad on the front panel.)

For Search/playback/Archive/backup, please refer to Chapter 5, Search by time.

5.4. Smart Search



Special functions	
Functions	**Description**
Camera ID	*The camera to be searched for matched files. *Its title is shown on its right side. *Press **+/-** buttons to change the camera ID.
Start/End Time– (**Year**, **Month**, **Date**, **Hour**, **Minute**)	*For the recorded video/audio. *The files will be searched from the start time to the end time entered here when the user press the **SEARCH/MODE** button later for the matched files. Press **+/-** buttons to modify each item.

Matched file List	* The matched files (HDD ID & time are shown) according to the selected search time, camera, and motion masks. *The files are shown from the oldest to the newest, and its page number is shown on the lower-left corner. *The user may: (1)Press "**ENTER"**to enter Smart Search Playback display of the selected matched file in this list, (2)Press "**Play Button" (▶/Ⅱ) (Mouse: Left click twice)** to playback it directly, or (3)Press"**Copy Button"(** **)(Mouse: Left click)** to **backup (copy)** the selected recorded video/audio to the connected backup device **without playback**. ***Please note that this kind of backup without playback is performed in the background, and the user can still do almost all the operations.** ***Also note that the playback (or backup) can walk across all the matched files.**
Area..	*The motion areas for the camera to be searched for matched files. ***The files with motion covering all the motion areas will be selected as matched.** *Press "**ENTER"**button **(Mouse: Left click)** in **Area..** to call up Motion Area Setting screen as shown below. *In Motion Area Setting screen, the video area is divided into many small grids, and the **gray areas** shown on the screen are the areas which will be checked for matched motion. *Besides, there is a (yellow) Mask window. ***Please note that based on the search algorithm, there will be more matched files for smaller areas.**

The Status field will show the 'Recorded from' time in the HDDs before searching or the search result after searching.

Buttons	Functions
SEQ =>Page Up **(Mouse: Left click)**	
X2(CALL)=>Page down**(Mouse: Left click)**	
Copy =>Backup **(Mouse: Left click)**	Press"**Copy"** to backup files.
Numeric (ENTER) (Mouse: Left click in the page number shown)	Press these buttons to select the display page of the matched files in the list. (Please note that there are only 1/2/3/4 available for the keypad on the front panel.)
SEARCH / MODE (Mouse: Left click)	*Press this button to start searching the recorded video/audio with the selected search time, camera, and motion masks. *The search result will be shown on the right half of this dialog.
***To prevent the system from overloading by Smart Search, up to 500 matched files or 100 GB of HDD storage for each record partition, alarm or normal, from the start time will be searched.**	
▲▼◄► **(Mouse: Left click)**	Press these buttons to select the items.
ESC (Mouse: Right Click)	Press this button to escape from this screen, and return to split-window display.

Functions(For Area..)

- ▲▼◄► button
  Press these buttons to move the Mask window.

- **+/- (Mouse: Left click and drag)**
  Press these buttons to resize the Mask window.

- **ENTER (Mouse:)**
  Press this button to set/reset the area under the Mask window.
  The area set will be shown with semi-transparent gray area.

■ **MODE (Mouse:)**

Press this button to set/reset the whole video area.

■ **ESC (Mouse: Right Click)**

Press this button to escape from Motion Area Setting screen, and return to Smart Search screen.

Playback/Archive For Smart Search

In Smart Search display, press **ENTER** to enter Smart Search Playback display of the selected matched file, or press **Play Button (▶/Ⅱ) (Mouse: Left click twice)** to playback it directly. **Please note that the playback can play all the (up to 500 per record partition) matched files , continuously.** So, it's not necessary for the user to repeat the process of Smart Search & Playback just for a single file. This display is the same as full screen display of the main display, and the playback buttons are effective.

The operations are as below:

■ **Playback Buttons (▶/Ⅱ, ■, ▶▶, ◀◀, ▶|, , MENU, ENTER, MODE, SEQ, SEARCH) (Mouse: , ..)**

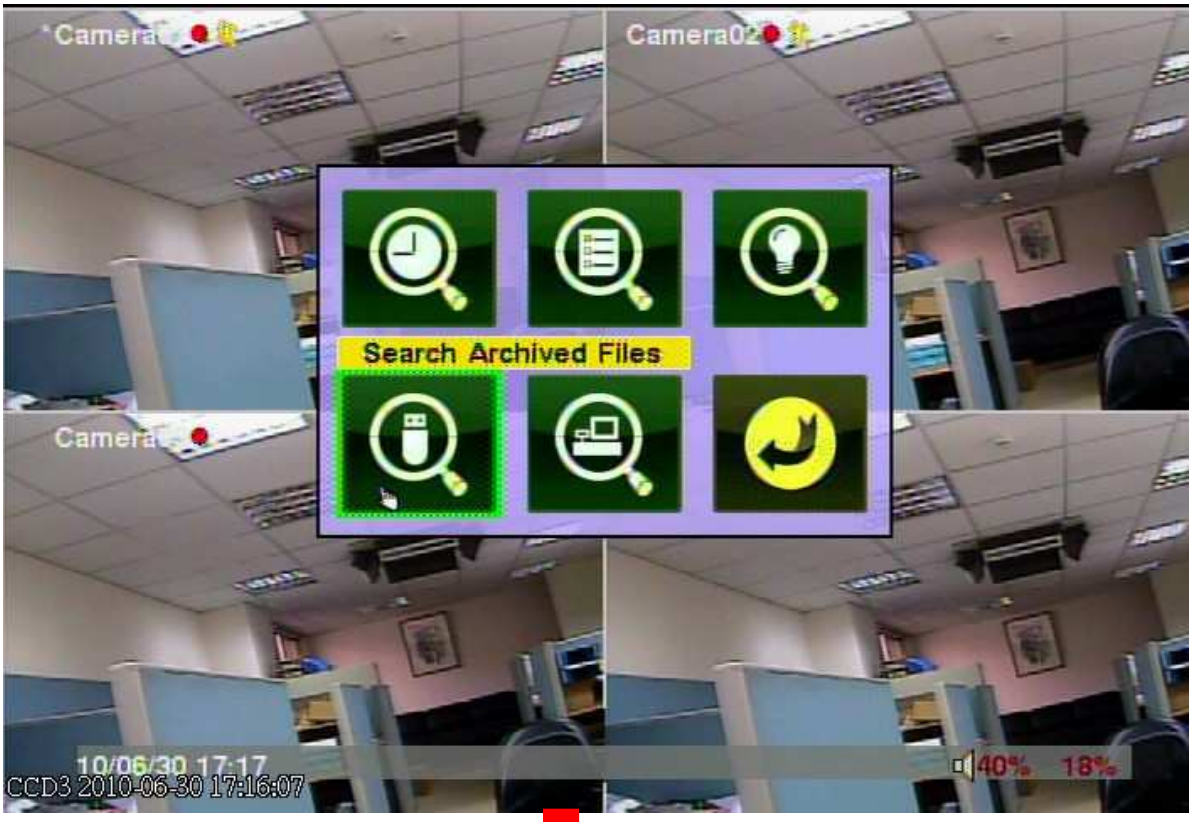
■ **CALL**

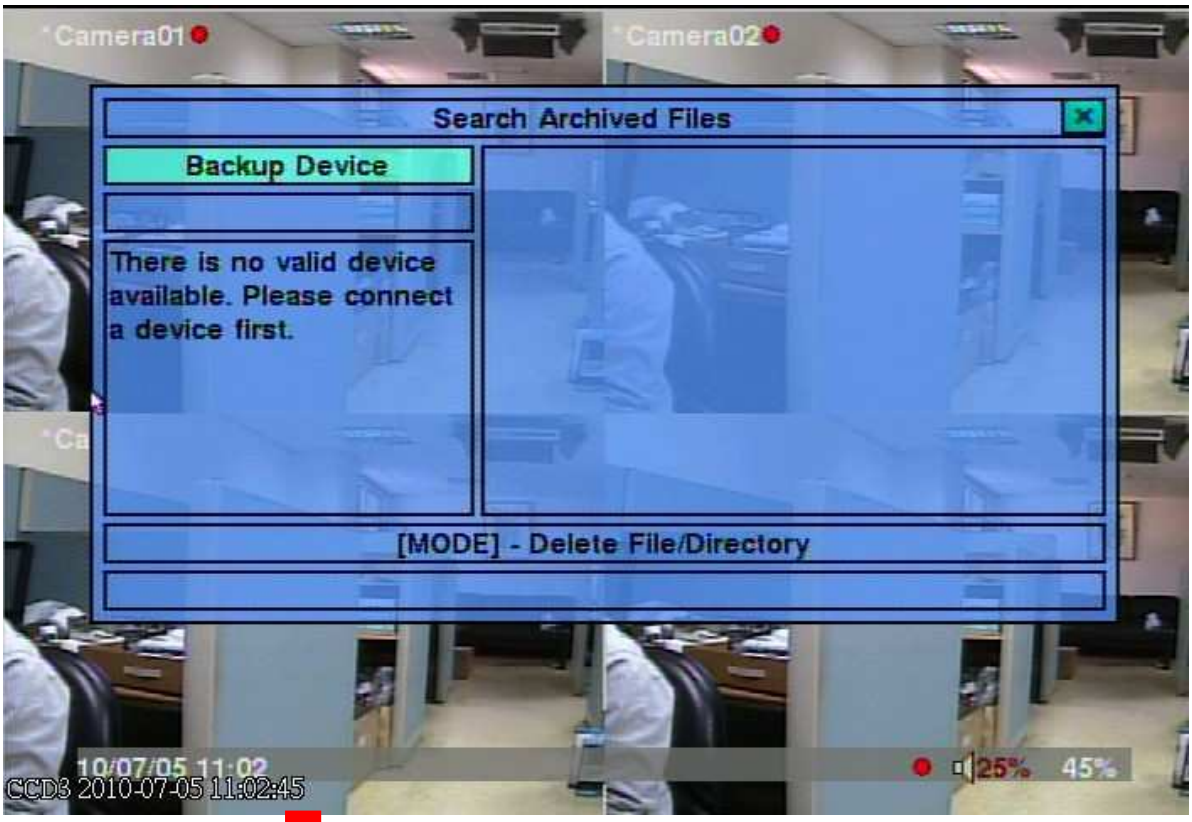
At playing the video, press this button to call up (show) or hide the Motion Areas set by the user.

***These buttons are all the same as in Chapter 5. Playback/Archive For Search By Time.**

For Search/playback/Archive/backup, please refer to Chapter 5, Search by time.

5.5. Search Archived Files





Functions	Description
Backup Device	* Press "**ENTER**" **(Mouse: Left click)** to call up Backup Device dialog (if there's no Backup device connected).
Disk Storage	*To select the disk storage to search the archived files. *Press **+/-** buttons to select the available storage.
Archived File List	The archived files in the selected Disk Storage. Please select the file, and then press "**ENTER**"to enter Archived File Playback display of the selected file in this list, or press "**Play Button**" (▶/Ⅱ) **(Mouse: Left click twice)** to playback it directly. *Also, you may press "**MODE**" **(Mouse: Left click)** to delete the selected file.

The format of the filename is camNN-YYYYMMDD-hhmmss.h264: NN->stands for camera number; YYYY : year; MM: month ; DD: date; hh:hour ; mm:minute;ss:second.

Buttons	Functions
▲▼◄► **(Mouse: Left click)**	Press these buttons to select the items.
ESC (Mouse: Right Click)	Press this button to escape from this screen, and return to split-window display.

Playback For Archived Files

In Smart Search display, press "**ENTER**" button to enter Smart Search Playback display of the selected matched file, or press "**Play Button (▶/Ⅱ)**" **(Mouse: Left click twice)** to playback it directly.

Please note that the playback can walk across all the (up to 500 per record partition) matched files. So, it's not necessary for the user to repeat the process of Smart Search & Playback just for a single file. This display is the same as full screen display of the main display, and the playback buttons are effective.

The operations are as below:

■ **Playback Buttons (▶/Ⅱ,■,▶▶,◀◀,▶Ⅰ, , MENU, ENTER, MODE, SEQ, SEARCH) (Mouse: , ..)**

***Please note that COPY button ( ) is not effective in this display.**

For Search/playback/Archive/backup, please refer to Chapter 5, Search by time.

【Chapter 6. Remote Access】

6.1 PC Remote Access

The digital video/audio recorder can be accessed by using a web browser installed on a PC if this unit is connected to a network, either internet or intranet.

6.1.1.System Requirements of Remote PC

It is recommended to access the digital video/audio recorder using a PC that meets the following system requirements. If you use a PC that does not meet the following system requirements, it may cause problems such as slow imaging or the browser unable to operate.

- **PC**
  IBM PC/AT compatible with CPU Intel® Pentium® 4, 1.7 GHz or above.
- **OS**
  MicroSoft® Windows® XP, Windows® 2000 with SP4, Windows® Vista, or Windows® 7.
- **Monitor**
  1024 x 768 or above.
- **Memory (DRAM)**
  512MB, or 1024MB for Windows® Vista.
- **Web Browser**
  MicroSoft® Internet Explorer® 6.0 or above.
- **DirectX**
  MicroSoft® DirectX® 9.0 or above.
- **Others**
  Windows XP KB319740 Package if Windows XP SP2 is installed.

6.1.2.Before Logging On

Before accessing this unit through web browser, please make sure the following notes :

The DVR already connected to the network correctly, and the configurations are all setup correctly.

DirectX® End-User Runtime 9.0 or above has been installed in your PC successfully. If not, please logon to http://www.microsoft.com to get the free download of it.

Windows XP KB319740 Package has been installed in your PC successfully if the PC is running **Windows XP SP2**. If not, please go to: http://www.microsoft.com/downloads/details.aspx?FamilyId=9B5EDFC8-A4BB-4080-9063-6518166E2DAB&displaylang=en for free download of it, or install it from the corresponding directory in the CD. (This package is a bug fix for Windows XP SP2.)

The domain name or IP address of the digital video/audio recorder has been set as **trusted web site** in your PC, and the **(https:) server verification** for trusted web site is **unchecked**.

If not, please go to Tools->Options->Security in your I.E. to do the settings. For **I.E. 7**, please set the **Security level for this zone** to **Low**

The ActiveX control in your PC is enabled. If you are not sure, please go to Tools->Options->Security->Custom in your I.E. to enable ActiveX control.

Port 67 (control port) or port 68 (data port) is not blocked out by your router or ISP (Internet Service Provider).

If the PC already used I.E. to access the software of DVR previously, please go to Tools->Options->General in your I.E. browser to **delete "Temporary Internet files" and all offline contents**.

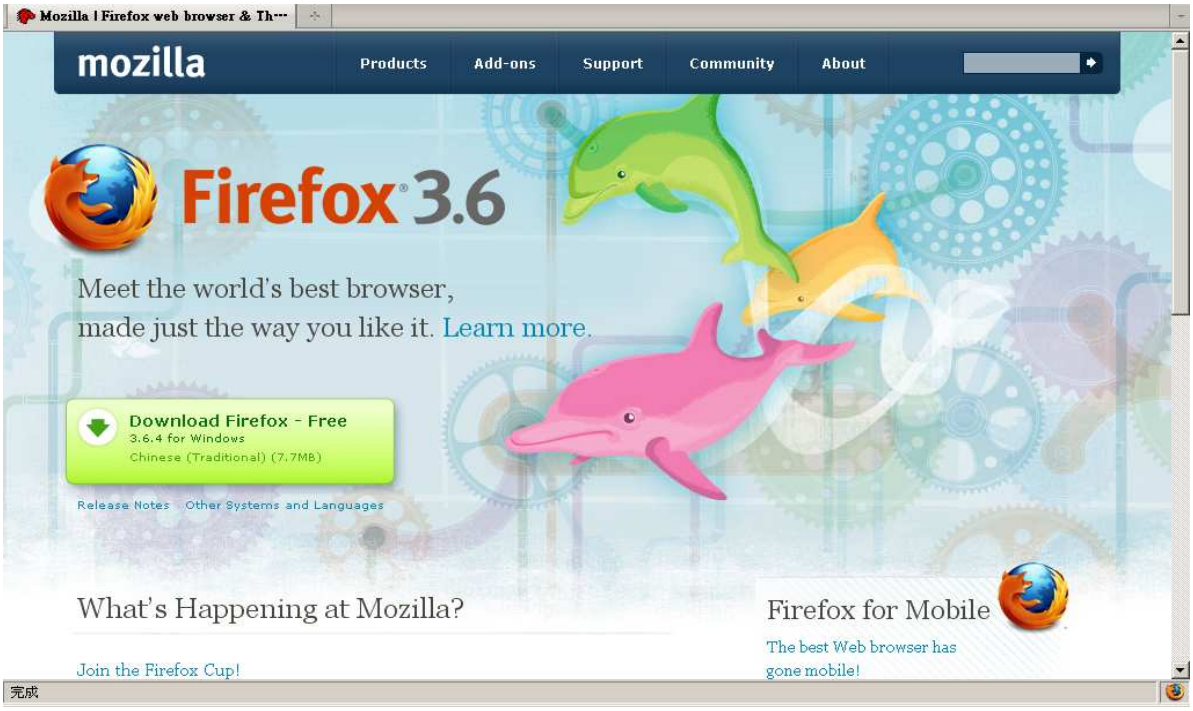
To have better appearance for your PC, please go to Start->Setup->Control, and select Display->Visual Style->Windows XP Style.

Please go to Start->Setup->Control, select Display->Settings, and set the Screen Resolution to at least 1024x768 and Color to 32-bit.

6.1.3.Firefox

If you would like to use Firefox to access the DVR, please follow the following steps:

Step1. Go to website of Firefox : http://www.mozilla.com/en-US/

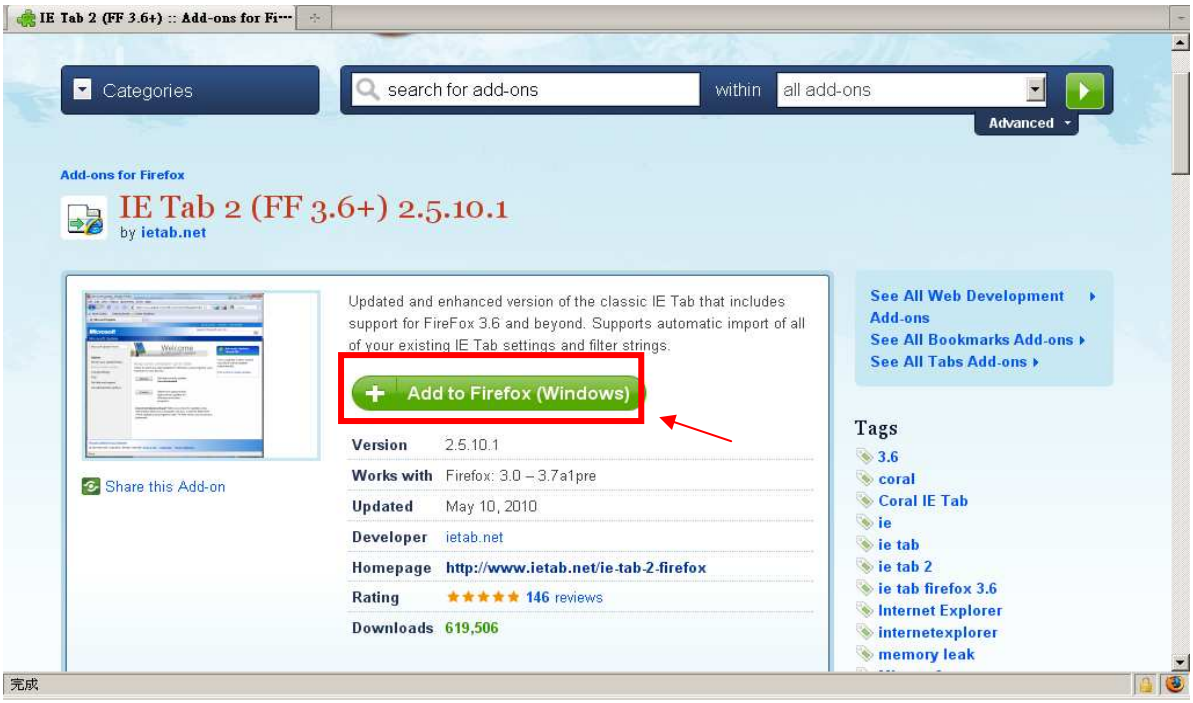


Step 2. Click" Download Firefox-free" icon to download free Firefox

Because of Firefox upgrade frequently , so we only provide the example of version Firefox 3.6 for your reference, herein, if there's upgrade version released , we will be revised in next version of manual.

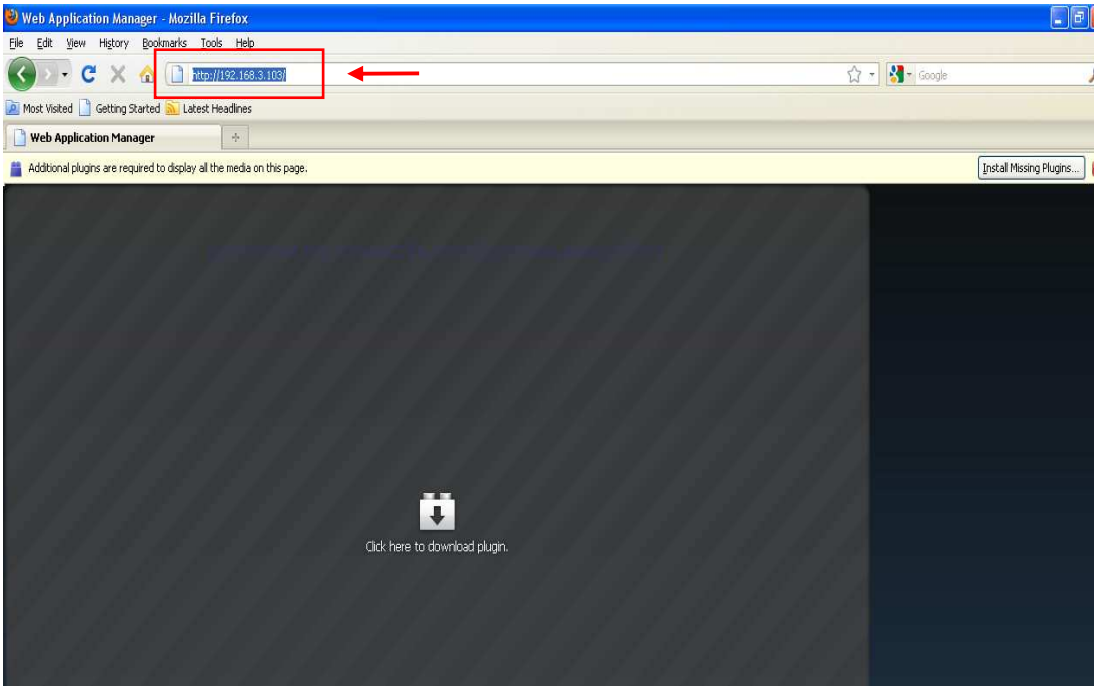
Step 3. Open the Firefox and then go to the webpage: **https://addons.mozilla.org/en-US/firefox/addon/92382/http://ietab.mozdev.org/** , to download and install IE Tab Plugin.

Step 4. Click**" Add to Firefox(windows)"** icon, to add IE tab 2.0 into Firefox.

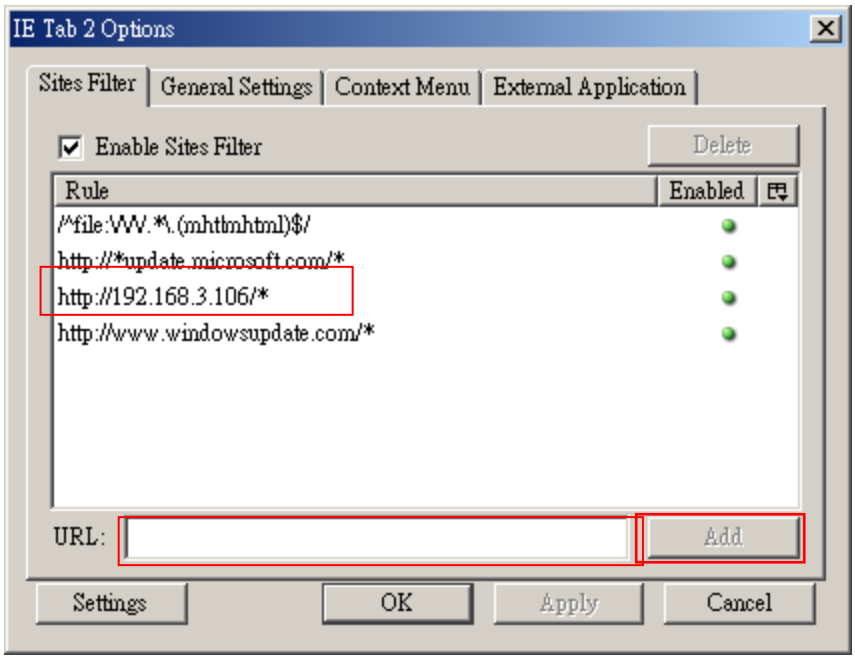


The firefox 3.6 support IE TAB 2.0,please check the version to see if you download the right version.

Step 5. key-in the IP address of standalone DVR which you would like to connect.


Web Application Manager - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://192.168.3.103
Most Visited Getting Started Latest Headlines
Web Application Manager
Additional plugins are required to display all the media on this page.
Install Missing Plugins...
Click here to download plugin.

Step 6. Select **"Tools"**(in firefox browser)->**IE Tab Options**->**Sites Filter**->**Enable Sites Filter**->click **"Add"** button from URL, to add the IP address of Standalone DVR and get the verification.



6.1.4.Log in(Remote Access)

After completed the setup steps, please restart your web browser and key in the domain name or IP address (For example: Please key in IP address and port: http://192.168.1.100, if the default value of HTTP port is 80 or http://192.168.1.100:800 if HTTP port is 800) of the digital video/audio recorder in the Location/Address field of the web browser. The plug-in software in the system will be downloaded and run automatically in the web browser.

Please note that up to 6 users can logon this DVR simultaneously.

6.1.5.Remote Display and Operations

1.Remote Access via Internet Explorer (IE)

Step 1. Key-in the IP address of Standalone DVR in IE browser.

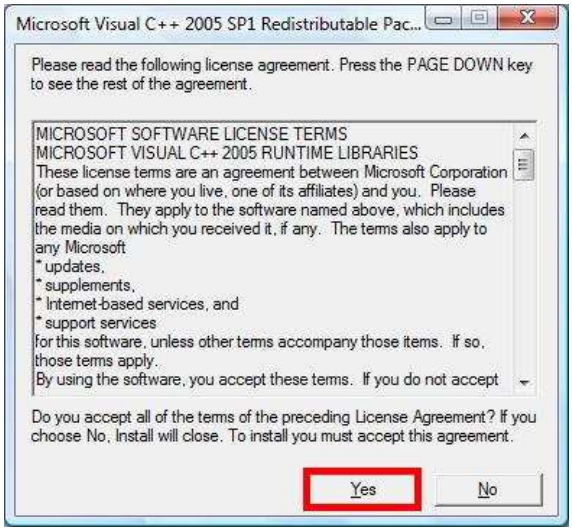
Step2. Click on **"Install ActiveX Control"** option.

IE-Plugin - Windows Internet Explorer
http://59.120.205.176/ie.htm
Live Search
IE-Plugin
Page
Tools
To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer. Click here for options...
Install ActiveX Control...
What's the Risk?
More information
Click here to install the following ActiveX control 'IEPlugin.cab' from 'KGUARD SECURITY CO., LTD.'...

Step3. Click on **"Install"** button.

Internet Explorer Add-on Installer - Security Warning
Do you want to install this software?
Name: Microsoft Visual C++ 2005 SP1 Redistributable Pack...
Publisher: Microsoft Corporation
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

Step4. Click on **"Yes"** button.

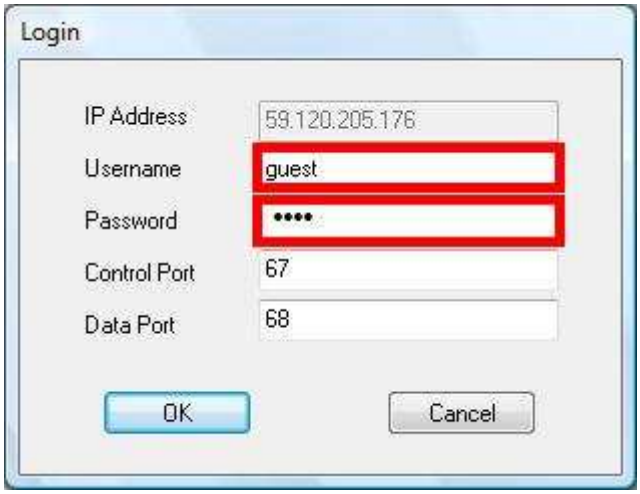

Microsoft Visual C++ 2005 SP1 Redistributable Pac...
Please read the following license agreement. Press the PAGE DOWN key to see the rest of the agreement.
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT VISUAL C++ 2005 RUNTIME LIBRARIES
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft
* updates,
* supplements,
* Internet-based services, and
* support services
for this software, unless other terms accompany those items. If so, those terms apply.
By using the software, you accept these terms. If you do not accept
Do you accept all of the terms of the preceding License Agreement? If you choose No, Install will close. To install you must accept this agreement.
Yes
No

Step5. Click on **"Install"** button

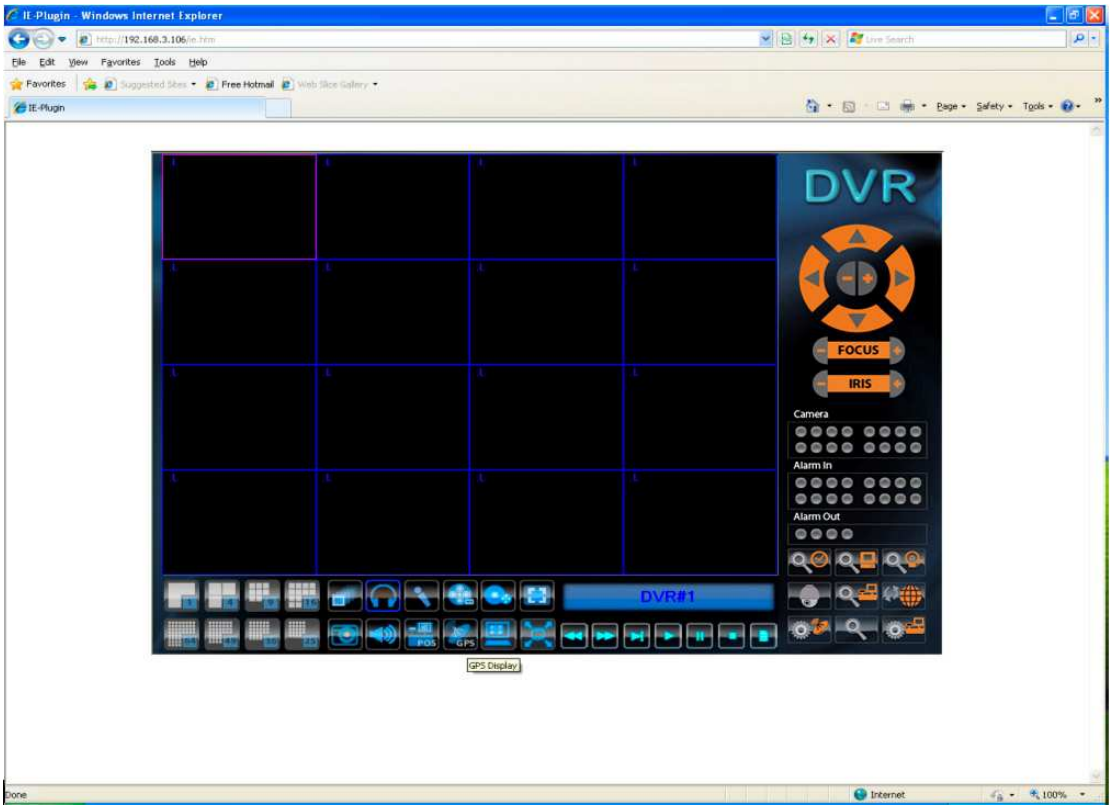
Internet Explorer Add-on Installer - Security Warning
Do you want to install this software?
Name: IEPlugin.cab
Publisher: KGUARD SECURITY CO., LTD.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

Step6. Type in the login name, password, control port and data port information to access the system.

- **The default login name: aa**
  password:11



Step7. Now you should check the Standalone DVR remote viewing with IE browser.



Step 2 - Step 5 only apply for initial setup

6.1.5.1.Control panel of Main Screen

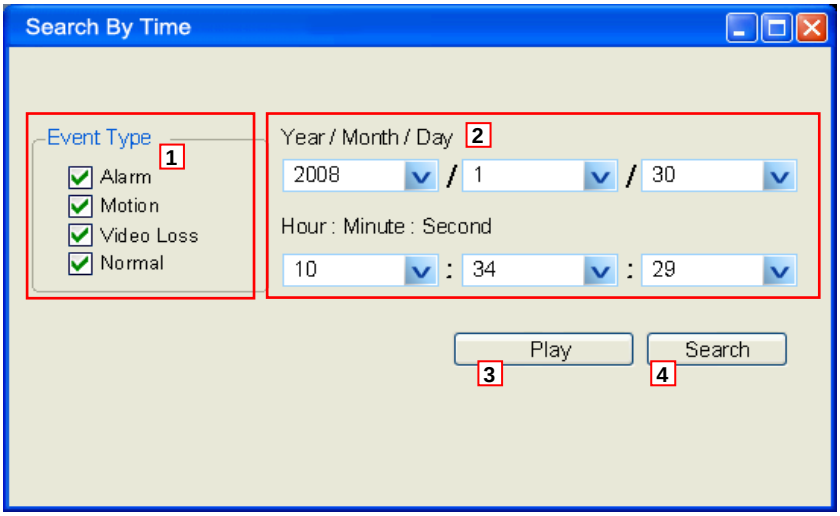
NO.	Functions		Description
1	Camera ID		Displays the ID of the camera.
2	Video Screen		This is to display both live and playback video.
3	Date/Time		This is to show the actual recording time and date of the video.
4	P T Z	PTZ Control	These buttons are for the control of the PTZ speed dome.
		Focus	This is to enable user to adjust the image video.
		Iris	This is to enable user to adjust the amount of light entering the camera lens.
5	Camera		These buttons correspond to the respective cameras connected to DVR.
6	Alarm In		These buttons correspond to the respective alarms connected to DVR.
7	Alarm Out		These buttons correspond to the cameras that are set tot respond to the alarm trigger.
8			Search by Time: This feature enables user to search for video data according to the specified date and time.
			Record file playback: Click to play the selected record file.
			Search by Event: This feature enables user to search for video data according to the event criteria.
			PTZ: Click to open the PTZ control panel.

		Software Upgrade: Click to upgrade the system.
		GPS Configuration: GPS Configuration enables user to customize the GPS setting.
		Server Configuration: This is for user to add new server, edit existing servers and to delete servers as well as configure the property of each server.
	DVR	Press the option to selected DVR screen.
	Playback Control	These buttons are for the playback, forward, rewind, stop and copy video.
9		Sequence Mode: Press to switch to sequence mode.
		Audio: Click to listen to the audio being recorded by the selected DVR server.
A		Microphone: When the feature is enabled, the voice of the user can be transmitted to the selected DVR server for hearing via IE. *NOTE: This feature is only enabled when connecting to microphone.*
		Search Mode: Press to switch to search and playback mode.
		Manual Backup: Press to setup the backup configuration.
		Freeze Mode: Press to freeze the image.
		Click on this icon for snapshot of the focus camera.
		Click on this icon for audio broadcasting to all connected DVRs.
		GPS: Press to bring up the GPS window.
	Screen Layout	User can choose the screen layout format.
B		

6.1.5.2.Search & Playback

A.Search By Time

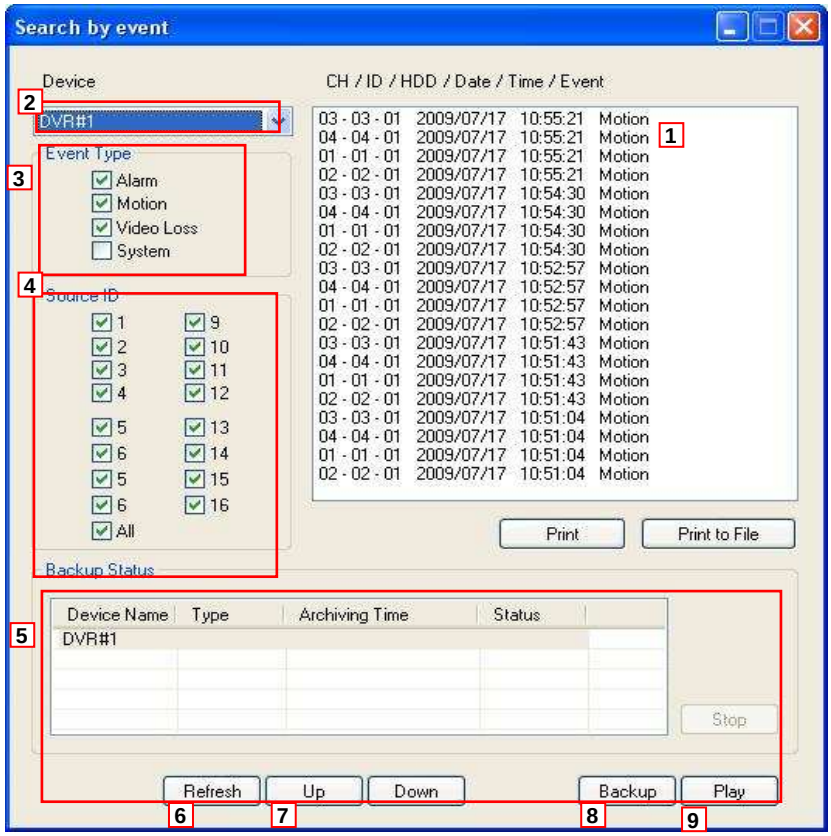
This feature enables user to search for a video data playback according to specific date, time and event type search criteria.



	Name	Description
1	Event Type	Check the type of video as the search criteria.
2	Date/Time	Select the date and time and set it as the search criteria.
3	Play	Click to play the searched video.
4	Search	Click to start the search process.

B.Search By Event

This feature enables user to search for a video data playback according to the device, event type and camera source.



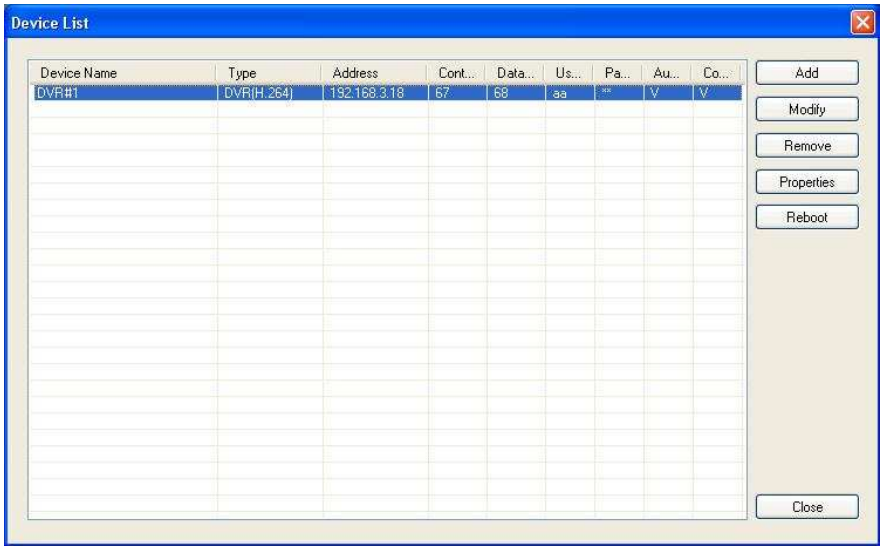
NO.	Functions	Description
1	Event List Window	The window lists out all the events searched according to the criteria set.
2	Device	Select the device for the data to be retrieved.
3	Event Type	Set the search criteria according to the event type set.
4	Source ID	Set the search criteria according to the cameras set.
5	Backup Status	The window displays the status of each server.
6	Refresh	Click to refresh the search process.
7	Up/down	Click to scroll along the event list.
8	Backup	Press to backup the highlighted video data manually.
9	Play	Click to play the highlighted video.

C.PTZ Control

NO.	Functions		Description
1	PTZ control		Click to control the pan / tilt / zoom of the PTZ speed dome.
2	Focus		Click ± to adjust the focus of the camera.
3	Iris		Click ± to adjust the camera iris.
4	Auto Pan	Run	Click to start the auto pan feature.
		Stop	Click to stop the auto pan feature.
		Set Start/End	Click to set the start and end time for automated pan feature.
5	SEQ	Run	Click to turn on sequence surveillance.
		Stop	Click to turn off sequence surveillance.
6	Preset	SET	Click to set the camera at a specific location.
		Goto	Click to access the image taken by the camera at its preset point.

D.Server Configuration

This is for user to add new DVR, edit existing DVR and to delete DVR as well as configure the property of each DVR. Setup configuration of the specific DVR can be modified and uploaded to the respective DVR remotely.



E.Add New Server

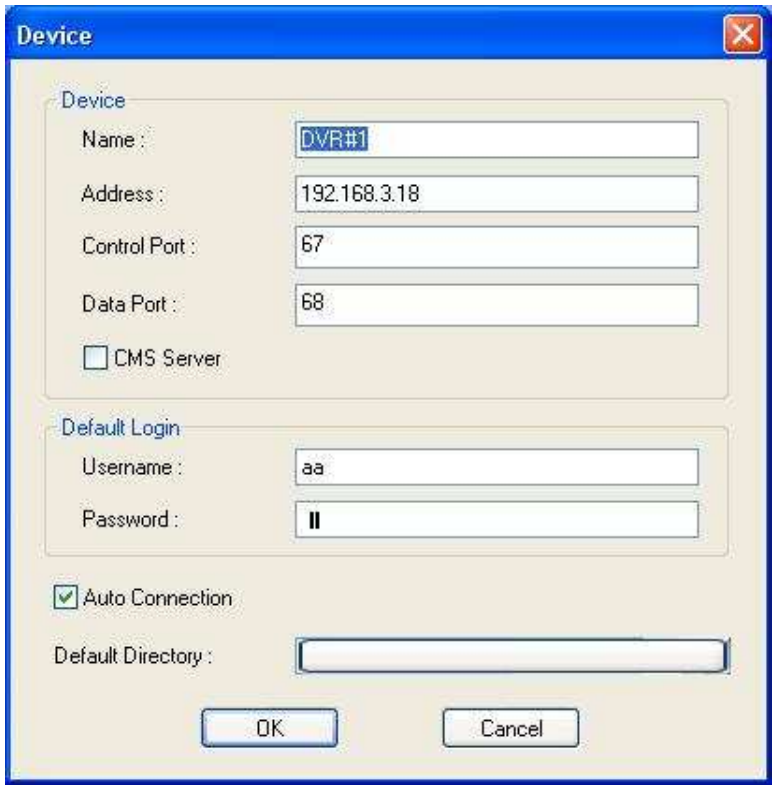
Press Add to add a new server.

STEP1: Enter device name, address, control port, data port, username and password and then click OK.

Optional: User may also select Auto Connection to enable auto connection to the DVR.

F.Modify Server

Press Modify to modify the server information.

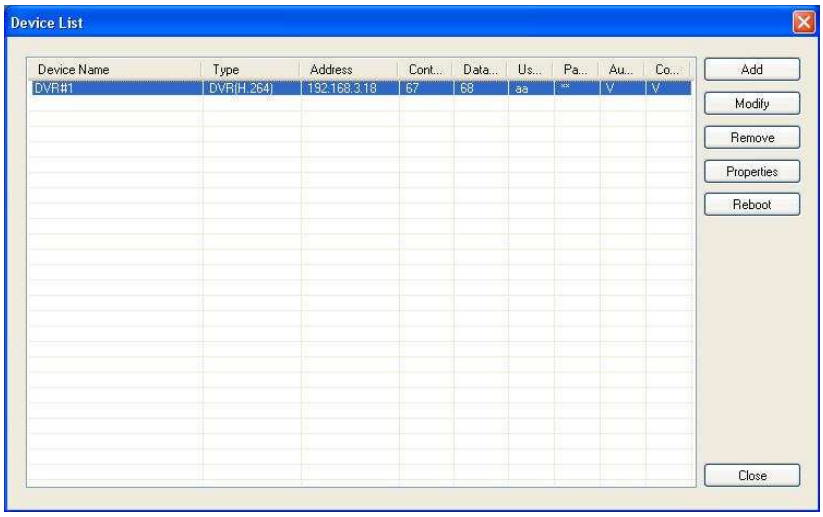


STEP1: Delete all the information that is to be modified.

STEP2: Then enter new information into their respective columns.

STEP3: Then click OK to save changes.

G.Delete Server



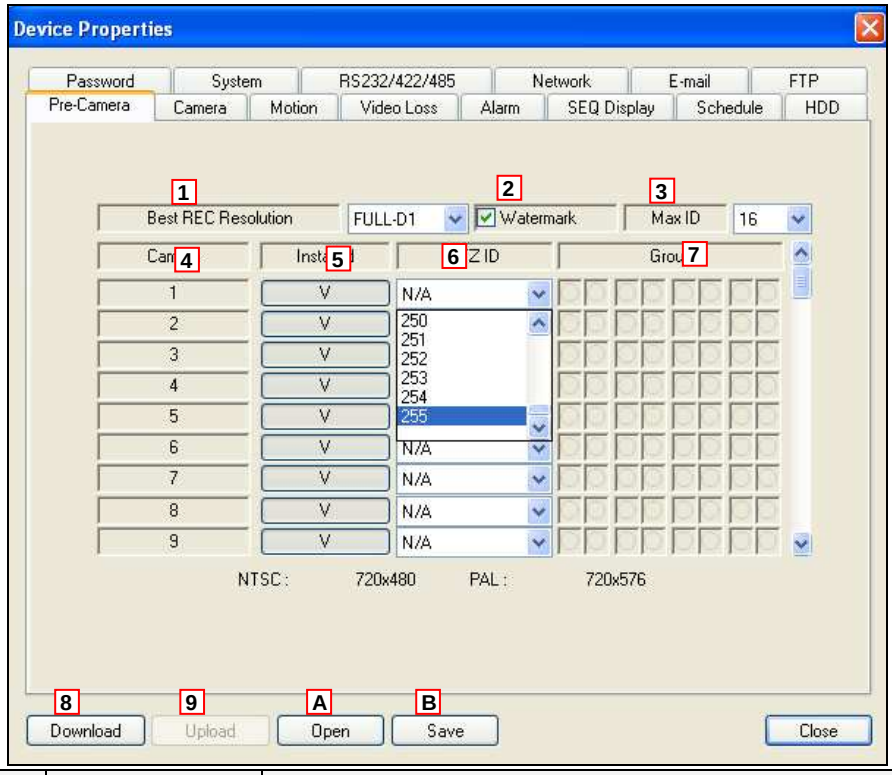
STEP1: Select the Server to be discarded.

STEP2: Click Remove to delete the server.

H.Configure Server Property

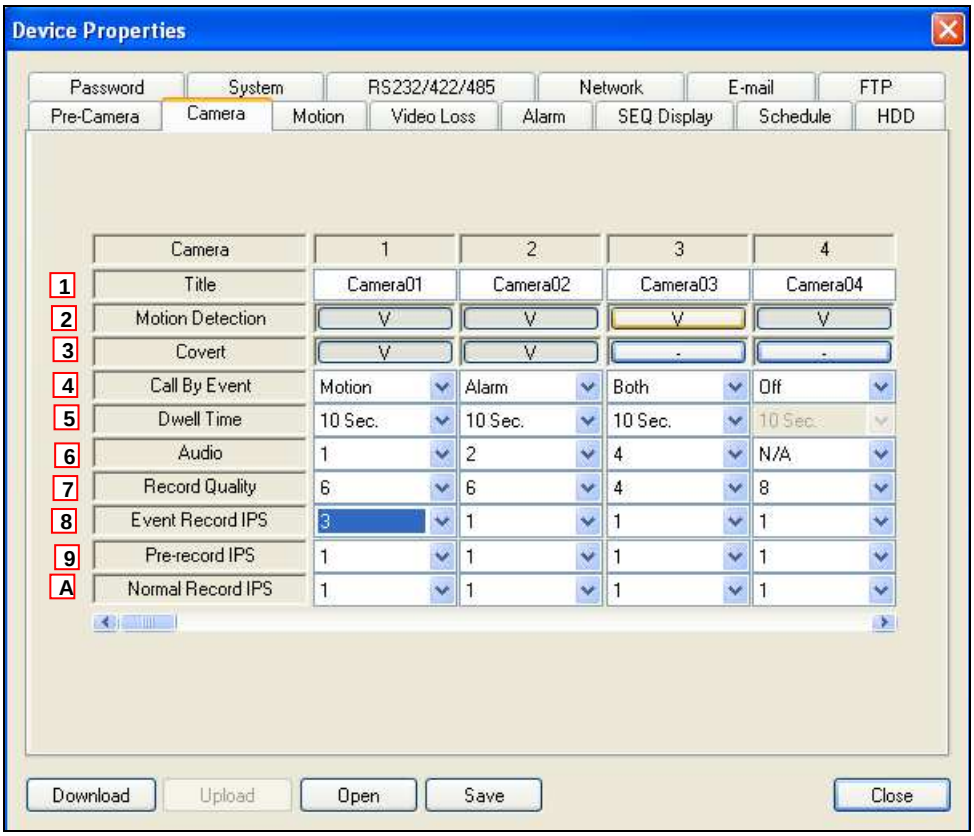
Press Properties to enter the server configuration page.

2.1.1.1.1 Pre-camera



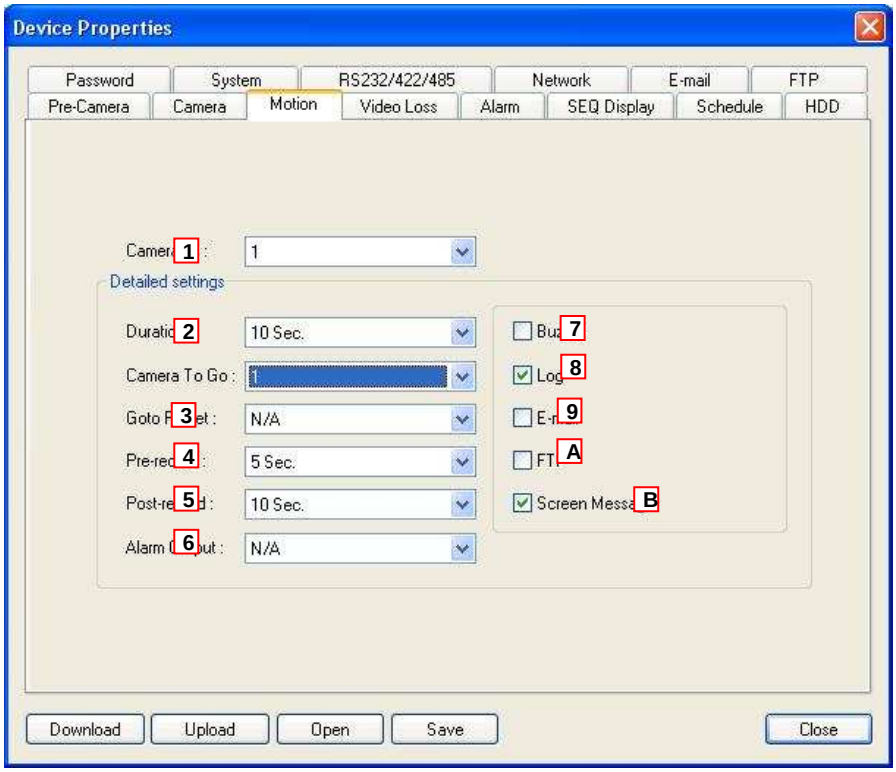
NO.	Functions	Description
1	Best REC Resolution	Select to adjust the recording resolution.
2	Watermark	Click to watermark the video.
3	Max ID	Click to set the maximum number of camera available on a specific DVR.
4	Camera	This shows the camera of a specific DVR.
5	Installed	Click to activate the camera.
6	PTZ ID	Assign an ID to the PTZ camera for identification purpose.
7	Group	Allow the assignment of each camera into different groups.
8	Download	This function enables user to download the original configuration from the host system should any accidental modification occur. It also allows user to reconfirm whether the modified configuration has been properly updated to the host system.
9	Upload	Click to upload the modified configuration to the host system through internet.
A	Open	Click to apply the previously saved setting to the current configuration.
B	Save	Press to save the setting to a specified location.

I.Camera



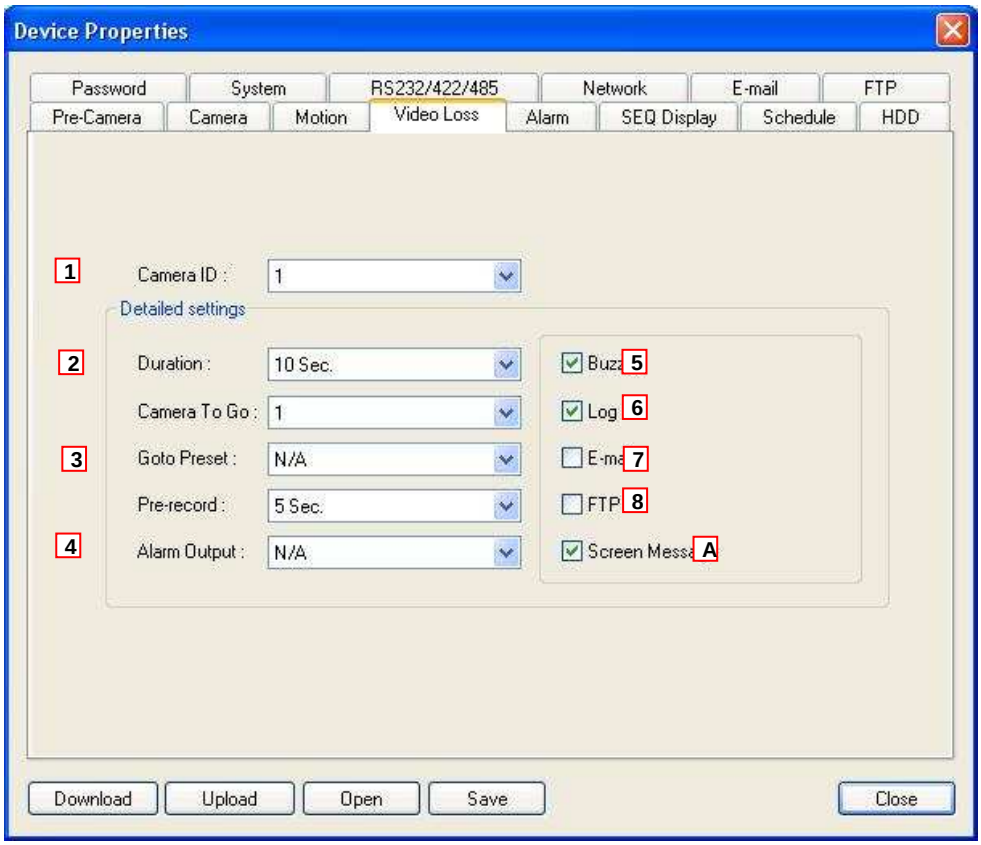
NO.	Functions	Description
1	Title	Assign a title to each camera for easy identification.
2	Motion Detection	Click to activate the motion detection feature for the specific camera.
3	Covert	Click to activate the covert feature for the specific camera. *NOTE: When covert is activated, only administrator/supervisor level users can view the live video of the respected camera.*
4	Call By Event	Click to select the purpose of the camera whether it is for motion detection, alarm or both.
5	Dwell Time	Select the interval period of each camera display.
6	Audio	Click to select the audio input.
7	Record Quality	Allow the adjustment of recording quality.
8	Event Record IPS	Allow the adjustment of event recording rate.
9	Pre-record IPS	Allow the adjustment of pre-recording rate.
A	Normal Record IPS	Allow the adjustment of normal recording rate.

J.Motion



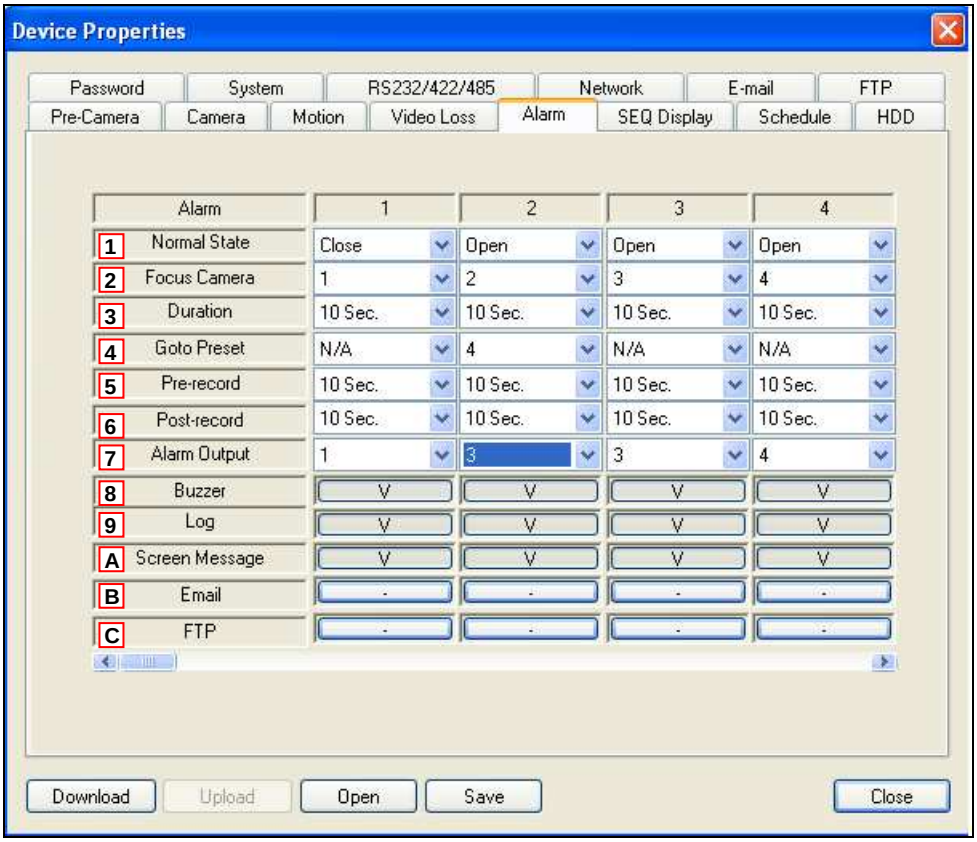
NO.	Functions	Description
1	Camera ID	Select the camera as a motion trigger.
2	Duration	Set the notification duration during motion detection.
3	Goto Preset	Set which camera preset location to be displayed upon a motion
4	Pre-record	Set the pre-recording time.
5	Post-record	Set the post-recording time.
6	Alarm Output	Select the alarm output notification during motion detection.
7	Buzzer	Click this to enable the activation of buzzer warning during motion detection.
8	Log	Click this to enable the creation of a log during motion detection.
9	Email	Click this to enable a text notification display on the screen during motion detection.
A	FTP	Click this to have an email notification during motion detection.
B	Screen Message	Click this to have the notification sent to the FTP server during motion detection.

K.Video Loss



NO.	Functions	Description
1	Camera ID	Select the camera as a video loss trigger.
2	Duration	Set the notification duration during video loss.
3	Pre-record	Set the pre-recording time.
4	Alarm Output	Select the alarm output notification during video loss.
5	Buzzer	Click this to enable the activation of buzzer warning during video loss.
6	Log	Click this to enable the creation of a log during video loss.
7	Email	Click this to enable a text notification display on the screen during video loss.
8	FTP	Click this to have an email notification during video loss.
A	Screen Message	Click this to have the notification sent to the FTP server during video loss.

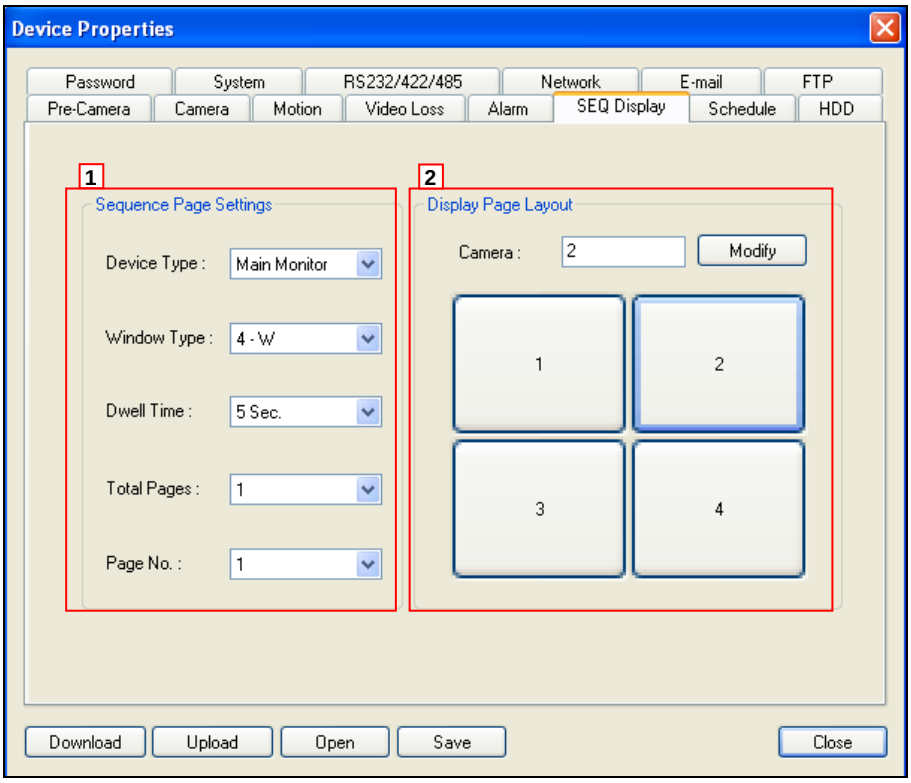
L. Alarm



NO.	Functions	Description
1	Normal State	Choose to turn on/off the alarm condition during normal state.
2	Focus Camera	Choose the focus camera upon an alarm trigger.
3	Duration	Set the alarm duration once it is triggered.
4	Goto Preset	Set which camera preset location to be displayed upon an alarm trigger.
5	Pre-record	Set the pre-recording time.
6	Post-record	Set the post-recording time.
7	Alarm Output	Assign an alarm output when the alarm is triggered.
8	Buzzer	Click this to enable the activation of buzzer warning during an alarm trigger.
9	Log	Click this to enable the creation of a log when the alarm is triggered.
A	Screen Message	Click this to enable a text notification display on the screen during an alarm trigger.
B	Email	Click this to have an email notification during an alarm trigger.
C	FTP	Click this to have the notification sent to the FTP server upon an alarm trigger.

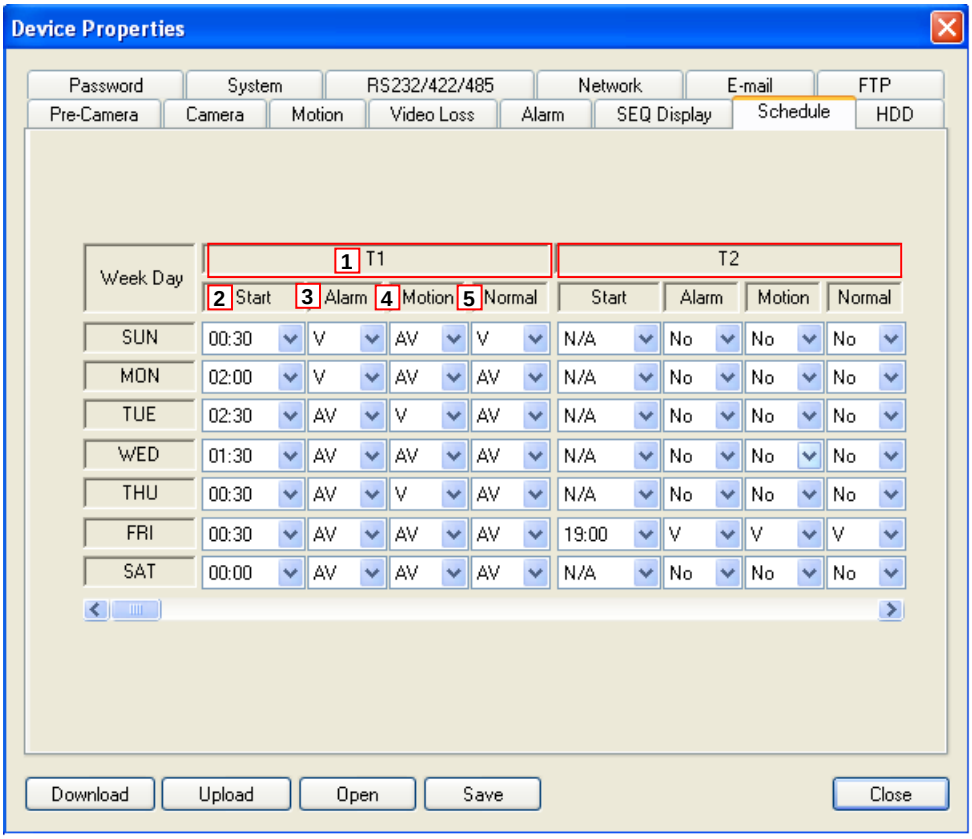
M.SEQ Display

This configuration allows user to setup the order of the surveillance sequence of each DVR.



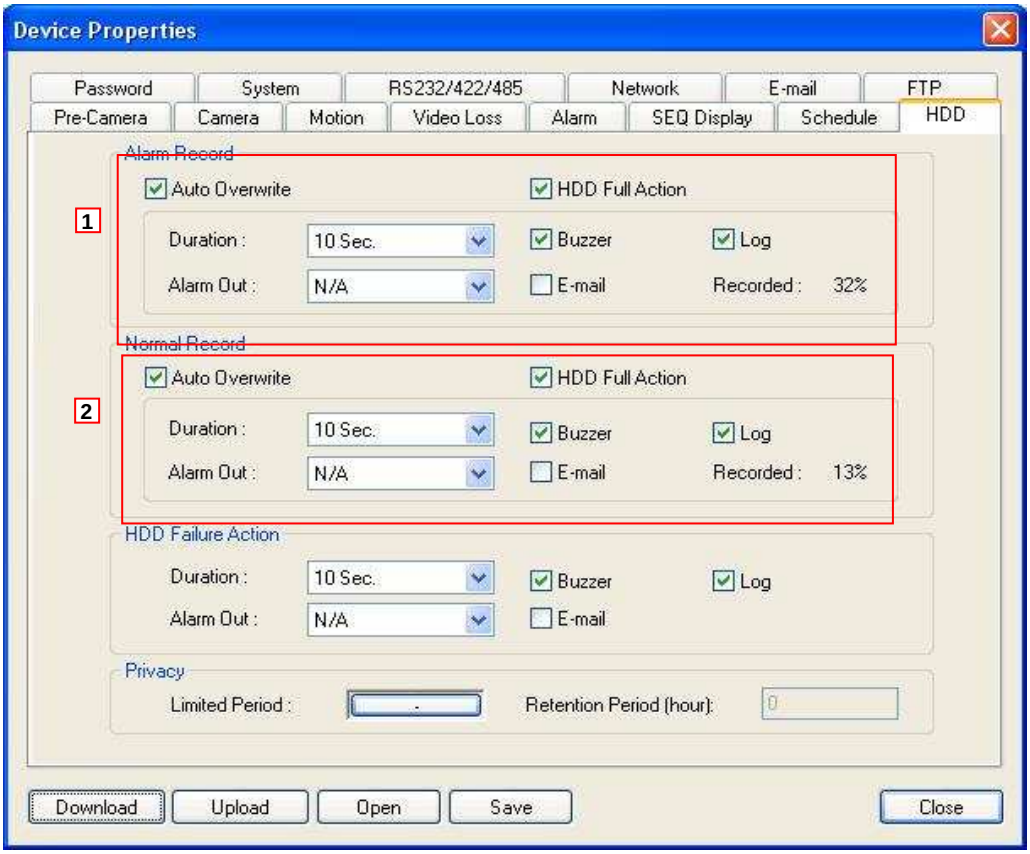
NO.	Functions		Description
1	Sequence Page Setting	Device Type	Select the appropriate monitor for the surveillance sequence.
		Window Type	Select the number of display channel for each surveillance page.
		Dwell Time	Select the interval period of each surveillance page.
		Total Page	Select the total number of page that will be displayed in the surveillance order.
		Page No.	User can set the camera to be displayed on the selected surveillance page.
2	Display Page Layout		Set the camera to be displayed on the selected surveillance page then click modify.

N. Schedule



NO.	Functions	Description
1	T(x)	This represents the number of schedule segment. **※User can set up to a maximum of 16 different schedule segments. The beginning of the new schedule segment represents the end of the previous schedule segment. Thus, a warning dialog box will appear when two time schedule segments overlap.**
2	Start	Allows user to set the start recording time.
3	Alarm	User may choose to only record video or audio or both video and audio during alarm recording period.
4	Motion	User may choose to only record video or audio or both video and audio during motion detection recording period.
5	Normal	User may choose to only record video or audio or both video and audio during normal recording period.

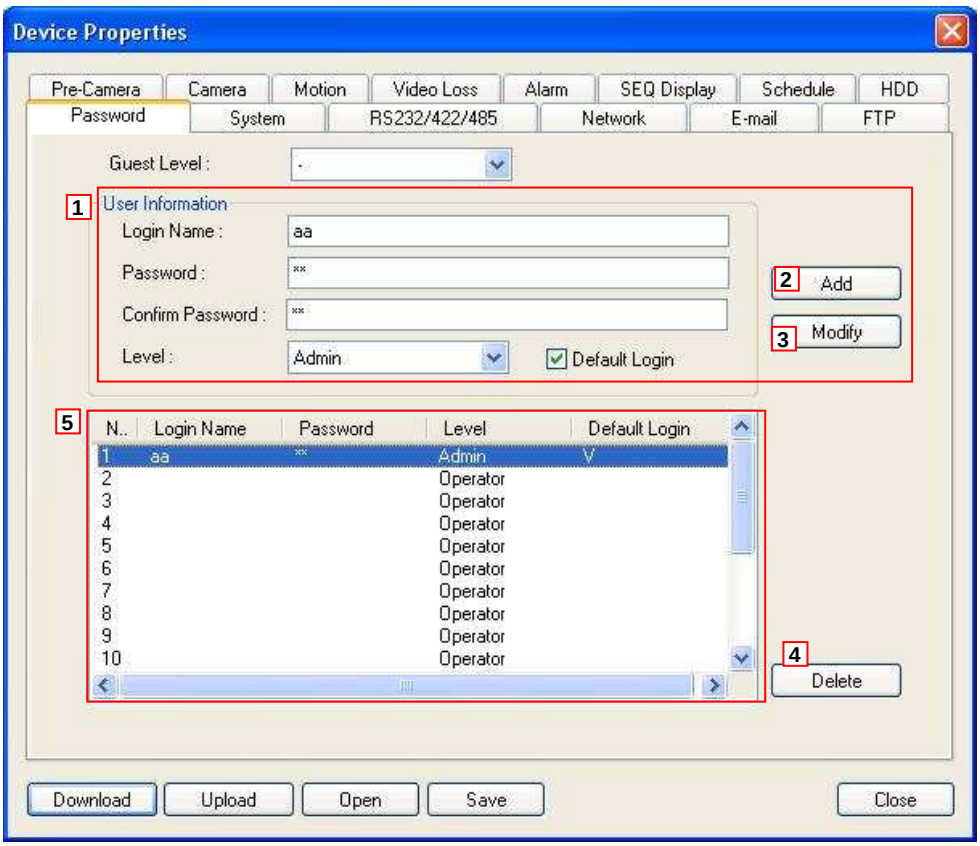
O. HDD



NO.	Functions		Description
1	Alarm Record	Auto Overwrite	Select this will enable the overwritten of old data when the disk capacity is achieved.
		HDD Full Action	Select this will enable full usage of HDD capacity.
		Duration	User may set the duration of warning period.
		Alarm Out	User may set the alarm out device.
		Buzzer	Click to enable buzzer warning.
		Email	Check to enable warning notification being sent to email.
		Log	Click to enable the creation of log.
2	Normal Record	Auto Overwrite	Select this will enable the overwritten of old data when the disk capacity is achieved.
		HDD Full Action	Select this will enable full usage of HDD capacity.
		Duration	User may set the duration of warning period.
		Alarm Out	User may set the alarm out device.
		Buzzer	Click to enable buzzer warning.
		Email	Click to enable warning notification being sent to email.
		Log	Click to enable the creation of log.

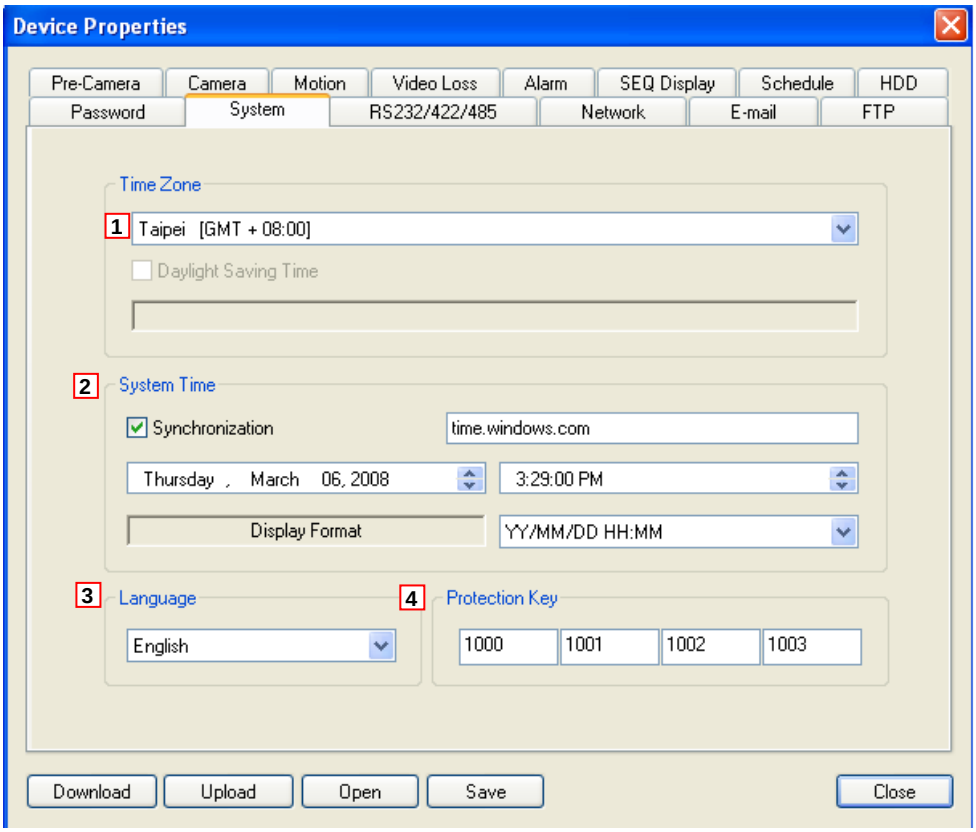
P. Password

This configuration allows administrator to assign login name and password to other users.



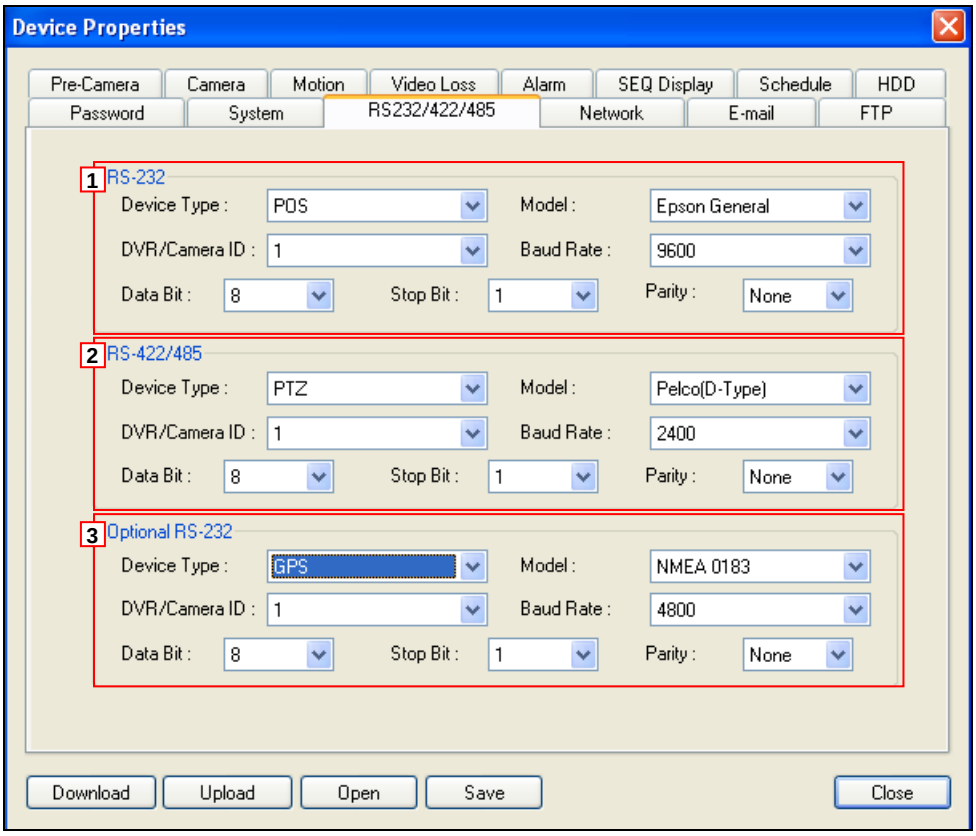
NO.	Functions	Description
1	User Information	Administrator can create user accounts for other users by assigning login name, password and user level.
2	Add	Click to add a new user account.
3	Modify	Click to change the user account information.
4	Delete	Click to delete a user account.
5	User List	The window displays all the user accounts.

Q. System



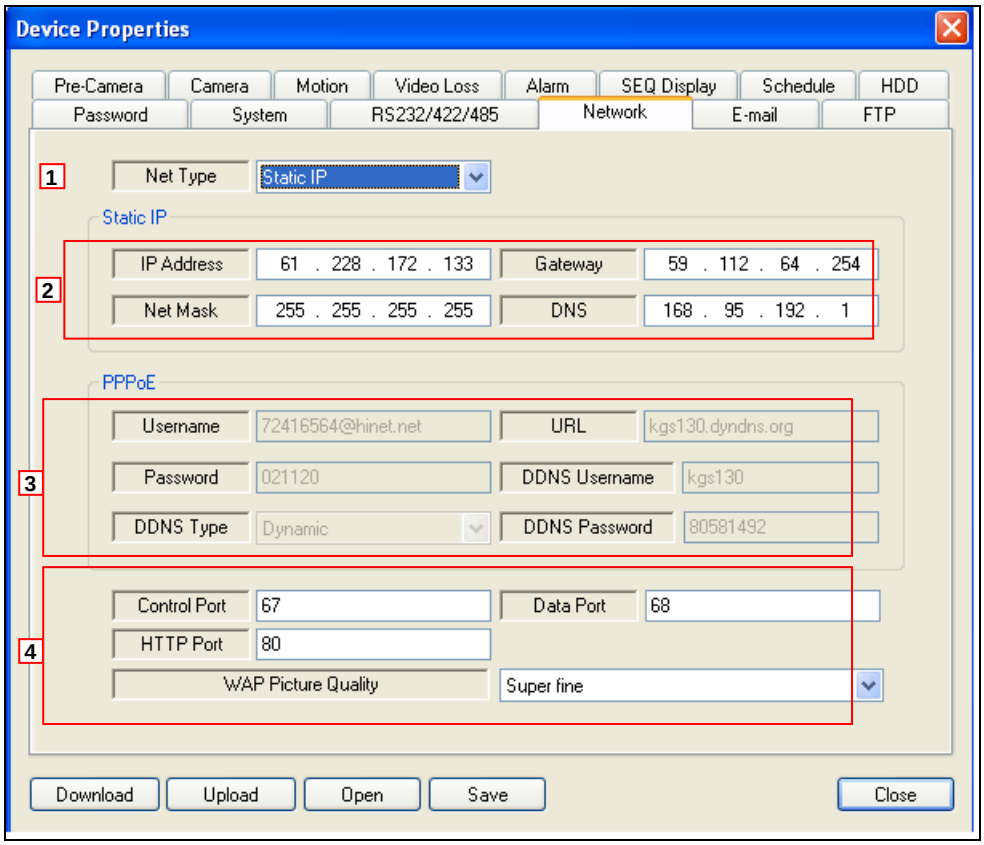
NO.	Functions	Description
1	Time zone	Select the suitable time zone from the drop down menu.
2	System time	User can manually set the time of the system or set the system to synchronize its time with a specific standard time server.
3	Language	Choose a language setting from the drop down menu.
4	Protection Key	This function is currently inapplicable.

R. RS232/422/485



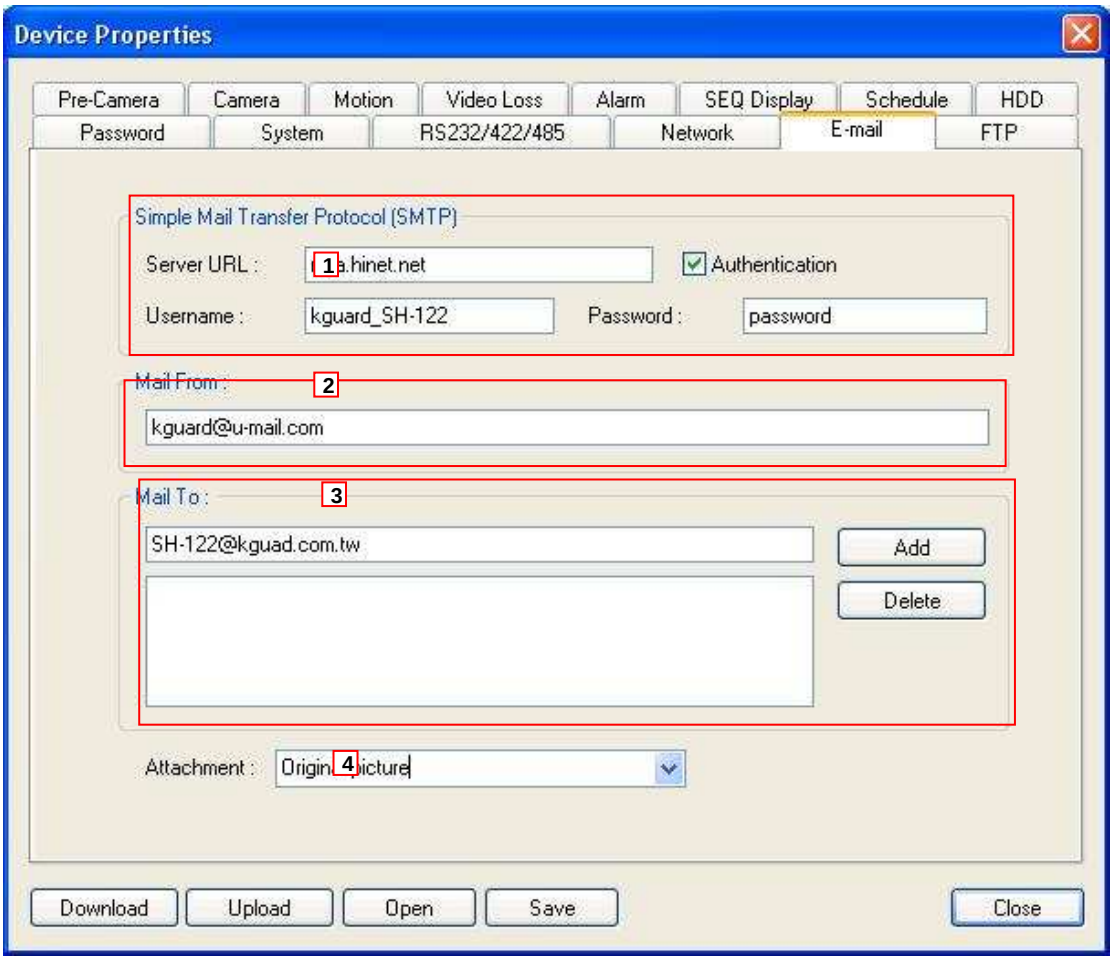
NO.	Functions	Description
1	RS-232	Select the appropriate device that uses the RS-232 signal, device model, camera ID, baud rate, data bit, stop bit and parity from the drop down menus.
2	RS-422/485	Select the appropriate device that uses the RS-422/485 signal, device model, camera ID, baud rate, data bit, stop bit and parity from the drop down menus.
3	Optional RS-232	Select the appropriate device that uses the RS-232 signal, device model, camera ID, baud rate, data bit, stop bit and parity from the drop down menus.

S. Network



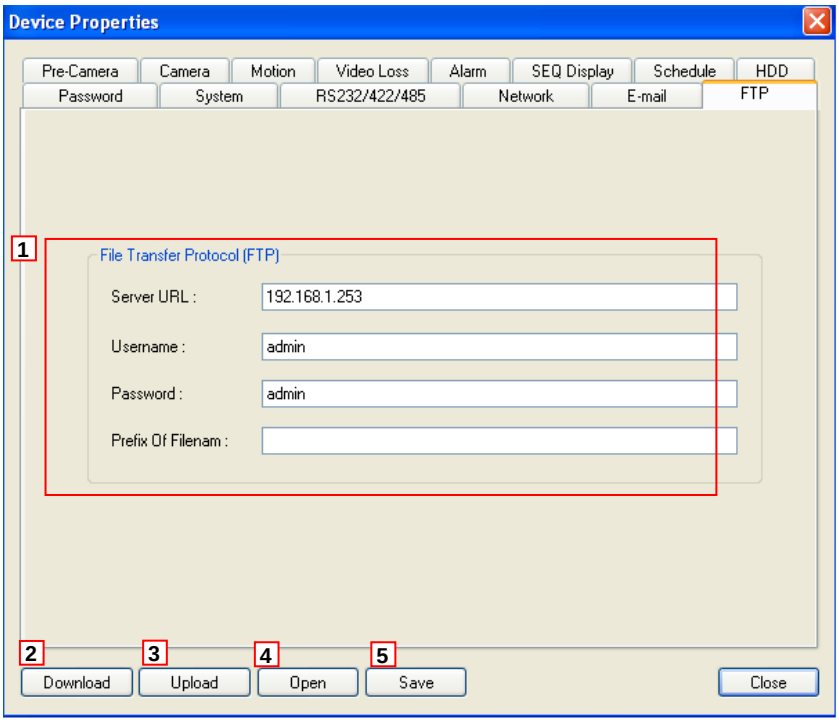
NO.	Functions	Description
1	Net Type	Choose the appropriate net type to configure. There are 3 types of net: Static IP, PPPoE and DHCP
2	Static IP	Type in the correct IP address, net mask, gateway and DNS. *Note: This section is only available when Static IP net is selected.*
3	PPPoE	Type in all the information in their respective columns. *Note: This section is only available for information entry when PPPoE net is selected.*
4	Control Port/ Data Port/ HTTP Port/ Warp Picture Quality	Fill in the correct port number in their respective columns. *Note This section is available for both static IP and PPPoE net.*

T. Email



NO.	Functions	Description
1	SMTP	Type in the server URL, username and password.
2	Mail From	Enter the email address of the sender.
3	Mail To	Enter the email address of the recipient.
4	Attachment	User can select the type of image to be attached to the mail.

U. FTP



NO.	Functions	Description
1	File Transfer Protocol	Fill in the FTP server address, username and password. User may also choose to assign a prefix for each file to enable easy differentiation.
2	Download	This function enables user to download the original configuration from the host system should any accidental modification occur. It also allows user to reconfirm whether the modified configuration has been properly updated to the host system.
3	Upload	Click to upload the modified configuration to the host system through internet.
4	Open	Click to apply the previously saved setting to the current configuration.
5	Save	Press to save the setting to a specified location.

【Chapter 7. PDA/Mobile Phone Remote Access】

The digital video/audio recorder can also be remotely accessed by using a web browser installed on a PDA or mobile phone (**EX. Nokia 5300, 6120C, Sony Ericsson W850i, Z610i**) that (1) supports **xHTML** and **MJPEG file format**, and (2) has screen resolution at **240x320** or above.

Please enter the domain name or IP address of the digital video/audio recorder in the Location/Address field of the web browser, and the remote login display will be shown. (For most of the mobile devices, the DVR will automatically redirect to the correct web page, EX. http://192.168.1.89/wap.htm for IP address http://192.168.1.89. If not, please enter the full address with /wap.htm. The user may need to enter http://192.168.1.89:800/wap.htm if HTTP port has been changed to 800.) Please enter the correct login name and password for the digital video/audio recorder to login the system, and the screen will be shown as below.

Following is a brief description for each item and its specific operations:

OK Click on this button to submit the content to the digital video/audio recorder. The new settings will take effect, and the screen will refresh.

Q1 Selection of Quad or 1-Window display.

-- **-- for snapshot, 1S-30S for auto-refresh of 1 second to 30 seconds, 0S for fast**

auto-refresh that supports HTML4.01.

: Status indicators for alarm inputs 1-4 (unchecked for normal, checked for alarm).

: Alarm outputs 1-2 (unchecked for normal, checked for triggered). Administrator can check to trigger the alarm output, uncheck for back to normal.

Following is a brief description for each item and its specific operations:

Appendix

Appendix A-Split Window Screen

The split-window screen, as shown above, is the main screen after system startup. There are two types of split-window screens, including:

1-Window(full screen), 4-Window(quad), 7-Window, 9-Window.

The system will memorize the setup, before shut down .

In addition to the split windows, the system time is displayed on lower-left corner, the system states on the lower-right corner, and the rolling screen messages, if shown while certain event occurs, on the lower corner.

The system states, from right to left, are described as the followings:

(1) Normal recording percentage,

(2) Alarm recording percentage,

(3) Mute state – speaker icon shown for not mute, not shown for mute,

(4) X2 state – X1, X2, or X4,

(5) Manual record ON/OFF – REC icon shown for ON,

(6) Backup state – Backup icon shown for backup, and

(7) SEQ display ON/OFF or playback state – SEQ icon shown for SEQ display ON, other icons for different playback states.

* If mouse is connected, the mouse operation icons will be shown when the mouse cursor is moved to the bottom of the screen.

* Recording icon, Motion, & Alarm for the camera may be shown after camera title.

Appendix B – Keyboard Control Protocol

Data Format	5 Bytes – Byte 1 : Synchronization Byte (0xFF) Byte 2 : Address, i.e. Device ID (0 – 0xFF) Byte 3 : Code (see below) Byte 4 : Reserved (0x00) Byte 5 : Checksum (sum of Bytes 2 – 4)
Code	**Value (MSB set for key press, MSB reset for release)**
0 – 9	0x30 – 0x39 (ASCII characters '0' – '9')
*/mark	0x2d (ASCII character '–' – Minus sign)
#/code	0x3d (ASCII character '=' – Equal sign)
Alarm Reset	0x71 (ASCII character 'q')
MODE	0x77 (ASCII character 'w')
SEQ	0x65 (ASCII character 'e')
CALL	0x72 (ASCII character 'r')
SEARCH	0x74 (ASCII character 't')
REC	0x79 (ASCII character 'y')
Fast Backward	0x61 (ASCII character 'a')
Fast Forward	0x73 (ASCII character 's')
Single Step	0x64 (ASCII character 'd')
Play/Pause	0x66 (ASCII character 'f')
Stop	0x67 (ASCII character 'g')
Copy	0x68 (ASCII character 'h')
MENU	0x75 (ASCII character 'u')
ESC/PTZ	0x6f (ASCII character 'o')
MUTE/NEXT	0x6e (ASCII character 'n')
X2/GOTO	0x2c (ASCII character ',' –

	Comma)
▲/BS	0x69 (ASCII character ‘i’)
▼/DEL	0x6d (ASCII character ‘m’)
◄	0x6a (ASCII character ‘j’)
►	0x6c (ASCII character ‘l’ – small L)
ENTER	0x6b (ASCII character ‘k’)
Vol –	0x7a (ASCII character ‘z’)
Vol +	0x78 (ASCII character ‘x’)
–	0x63 (ASCII character ‘c’)
+	0x76 (ASCII character ‘v’)
MAIN-AUX ON	0x62 (ASCII character ‘b’)
MAIN-AUX OFF	0x70 (ASCII character ‘p’)
CALL-AUX ON	0x5b (ASCII character ‘[’)
CALL-AUX OFF	0x5d (ASCII character ‘]’)
UP-LEFT	0x7b (ASCII character ‘{’)
DOWN-LEFT	0x7c (ASCII character ‘|’)
UP-RIGHT	0x7d (ASCII character ‘}’)
DOWN-RIGHT	0x7e (ASCII character ‘~’)

Appendix C – Keyboard Control Simulator

To run the **Keyboard Control Simulator** under MS-Windows, please select Start->Programs->Hyper Electronics Mappers->KCtrlSimulator, and the screen will be shown as below.

Please note that most of the buttons correspond to the keypads on the front panel. If you connect the PC through RS-232 and use an RS-232/RS-485 converter to connect to multiple DVRs, you would be able to control multiple DVRs via the simulation software.

To select the DVR to control, please click on the button as circled in the above diagram to set the corresponding DVR ID.

Note: **UP-LEFT**, **UP-RIGHT**, **DOWN-LEFT**, and **DOWN-RIGHT** are newly added to control the PTZ cameras diagonally.

Appendix D – M4V/H.264 to AVI Conversion Utility

Installation software of Utility:

Insert the Installation CD into the CD-ROM.

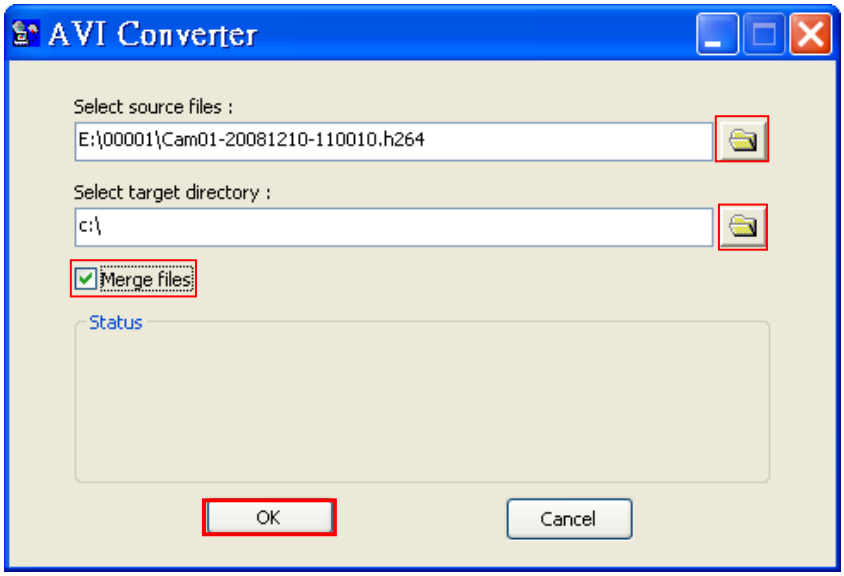
Execute ‘’Autorun.exe’’. Next Click on ‘’**Utility**’’ button.

* **AVI Converter:** For converting the backup file from Standalone into AVI file.
* **Keyboard Ctrl Simulator:** For simulating a keyboard to control over Standalone DVR.
* **M4V to AVI Converter.**

To run the **M4V/H.264 to AVI Conversion Utility** under MS-Windows:

Start->Programs->Hyper Electronics Mappers->AVI Converter

or double-click on the file **AVI_Converter.EXE**, and the screen will be shown as below.



Converting Steps:

Step 1. Select the source files to be converted:

***.M4V/.H264** files archived from DVR, remote I.E., and FTP file transfer from,

Step 2. Select the target directory to save the converted files,

Step 3. Check "Merge files" if you want chained backup files to be converted into one AVI file, and then click on "**OK"** button to make conversion.

*The converted **.AVI** files can be played by **Windows Media Player** if **DivX** or the other MPEG-4 decoder (for .M4V) or H.264 decoder (for .H264) is installed in the PC.

Appendix E – Time Zone Table

Time Zone	Offset	DST	Start	End
Samoa	GMT – 11:00			
Hawaii	GMT – 10:00			
Alaska	GMT – 09:00	ˇ	Mar, 2nd Sun, 2:00	Nov, 1st Sun, 2:00
Pacific Time (US & Canada)	GMT – 08:00	ˇ	Mar, 2nd Sun, 2:00	Nov, 1st Sun, 2:00
Arizona, US Mountain	GMT – 07:00			
Chihuahua, La Paz, Mazatlan	GMT – 07:00	ˇ	May, 1st Sun, 2:00	Sep, last Sun, 2:00
Mountain Time (US & Canada)	GMT – 07:00	ˇ	Mar, 2nd Sun, 2:00	Nov, 1st Sun, 2:00
Central America, Saskatchewan	GMT – 06:00			
Central Time (US & Canada)	GMT – 06:00	ˇ	Mar, 2nd Sun, 2:00	Nov, 1st Sun, 2:00
Guadalajara, Mexico City, Monterrey	GMT – 06:00	ˇ	May, 1st Sun, 2:00	Sep, last Sun, 2:00
Bogota, Lima, Quito, Indiana (East)	GMT – 05:00			
Eastern Time (US & Canada)	GMT – 05:00	ˇ	Mar, 2nd Sun, 2:00	Nov, 1st Sun, 2:00
Atlantic Time (Canada)	GMT – 04:00	ˇ	Mar, 2nd Sun, 2:00	Nov, 1st Sun, 2:00
Caracas, La Paz	GMT – 04:00			
Santiago	GMT – 04:00	ˇ	Oct, 2nd Sun, 0:00	Mar, 2nd Sun, 0:00
Newfoundland	GMT – 03:30	ˇ	Apr, 1st Sun, 2:00	Oct, last Sun, 2:00
Brasilia	GMT – 03:00	ˇ	Oct, 3rd Sun, 2:00	Feb, 3rd Sun, 2:00
Buenos Aires, Georgetown	GMT – 03:00	ˇ	Oct, 3rd Sun, 2:00	Feb, 2nd Sun, 2:00
Greenland	GMT – 03:00	ˇ	Mar, last Sun, 1:00	Oct, last Sun, 1:00
Mid-Atlantic	GMT – 02:00	ˇ	Mar, last Sun, 2:00	Sep, last Sun, 2:00

Azores	GMT – 01:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Cape Verde	GMT – 01:00			
Casablanca, Monrovia	GMT + 00:00			
Dublin, London	GMT + 00:00	ˇ	Mar, last Sun, 1:00	Oct, last Sun, 2:00
Western Europe, Central Europe	GMT + 01:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
West Central Africa	GMT + 01:00			
Eastern Europe	GMT + 02:00	ˇ	Mar, last Sun, 0:00	Oct, last Sun, 1:00
Cairo	GMT + 02:00	ˇ	Apr, last Fri, 2:00	Sep, last Fri, 2:00
Harare, Pretoria	GMT + 02:00			
Helsinki, Kyiv, Riga, Sofia, Tallinn	GMT + 02:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Jerusalem	GMT + 02:00	ˇ	Apr 1, 2:00	Oct, 2nd Sun, 2:00
Baghdad	GMT + 03:00	ˇ	Apr 1, 3:00	Oct 1, 4:00
Kuwait, Riyadh, Nairobi	GMT + 03:00			
Moscow, St. Petersburg, Volgograd	GMT + 03:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Tehran	GMT + 03:30	ˇ	Mar, 4th Tue, 2:00	Sep, 4th Thu, 2:00
Abu Dhabi, Muscat	GMT + 04:00			
Baku, Tbilisi, Yerevan	GMT + 04:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Kabul	GMT + 04:30			
Ekaterinburg	GMT + 05:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Islamabad, Karachi, Tashkent	GMT + 05:00			
Chennai, Mumbai, New Delhi	GMT + 05:30			
Kathmandu	GMT + 05:45			
Almaty, Novosibirsk	GMT + 06:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Astana, Dhaka, Sri Lanka	GMT + 06:00			
Rangoon	GMT + 06:30			
Bangkok, Hanoi, Jakarta	GMT + 07:00			

Krasnoyarsk	GMT + 07:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Irkutsk, Ulaan Bataar	GMT + 08:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Beijing, Chingqing, H. K., Urumqi	GMT + 08:00			
Kuala Lumpur, Perth, Singapore	GMT + 08:00			
Taipei	GMT + 08:00			
Osaka, Seoul, Tokyo	GMT + 09:00			
Yakutsk	GMT + 09:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Adelaide	GMT + 09:30	ˇ	Oct, last Sun, 2:00	Mar, last Sun, 3:00
Darwin	GMT + 09:30			
Brisbane, Guam, Port Moresby	GMT + 10:00			
Canberra, Melbourne, Sydney	GMT + 10:00	ˇ	Oct, last Sun, 2:00	Mar, last Sun, 3:00
Hobart	GMT + 10:00	ˇ	Oct, 1st Sun, 2:00	Mar, last Sun, 3:00
Vladivostok	GMT + 10:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Magadan, Solomon Is.	GMT + 11:00			
Auckland, Wellington	GMT + 12:00	ˇ	Oct, 1st Sun, 2:00	Mar, 3rd Sun, 2:00
Fiji	GMT + 12:00			
Kamchatka	GMT + 12:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Anadyr	GMT + 13:00	ˇ	Mar, last Sun, 2:00	Oct, last Sun, 3:00
Nuku’alofa	GMT + 13:00			

Appendix F – Recording Table

NTSC Recording Time (in Hour) - For Reference Only											
System Storage (GB): 200											
Resolution	Quality	Average	Recording Rate (IPS)								
		Picture Size (KB)*			120	60	30	15	10	5
720x480	9	32.2					58	115	173	345
(Full D1)	8	27.7					67	134	201	401
	7	21.0					88	176	265	529
	6	18.4					101	201	302	604
	5	14.0					132	265	397	794
	4	11.3					164	328	492	983
	3	7.7					241	481	722	1443
	2	5.6					331	661	992	1984
	1	3.6					514	1029	1543	3086
720x240	9	16.1				58	115	230	345	690
(Half D1)	8	13.9				67	133	266	400	799
	7	10.5				88	176	353	529	1058
	6	9.2				101	201	403	604	1208
	5	7.0				132	265	529	794	1587
	4	5.7				162	325	650	975	1949
	3	3.9				237	475	950	1425	2849
	2	2.8				331	661	1323	1984	3968
	1	1.8				514	1029	2058	3086	6173
360x240	9	8.0			58	115	230	463	694	1389
(CIF)	8	7.0			67	133	266	529	794	1587
	7	5.2			88	176	353	712	1068	2137
	6	4.6			101	201	403	805	1208	2415
	5	3.5			132	265	529	1058	1587	3175
	4	2.9			162	325	650	1277	1916	3831
	3	2.0			237	475	950	1852	2778	5556
	2	1.4			331	661	1323	2646	3968	7937
	1	0.9			514	1029	2058	4115	6173	12346

* Average Picture Size is estimated based on typical camera scene, and averaged by H.264 I/P/P frames.

PAL Recording Time (in Hour) - For Reference Only										
System Storage (GB): 200										
Resolution	Quality	Average	Recording Rate (IPS)							
		Picture Size (KB)*			100	50	25	12.5	8	4
720x576	9	42.0					53	106	165	331
(Full D1)	8	36.0					62	123	193	386
	7	27.3					81	163	254	509
	6	21.3					104	209	326	652
	5	18.3					121	243	379	759
	4	14.7					151	302	472	945
	3	10.0					222	444	694	1389
	2	7.3					304	609	951	1903
	1	4.7					473	946	1478	2955
720x288	9	21.0				53	106	212	331	661
(Half D1)	8	18.0				62	123	247	386	772
	7	13.6				82	163	327	511	1021
	6	10.7				104	208	415	649	1298
	5	9.2				121	242	483	755	1510
	4	7.4				150	300	601	938	1877
	3	5.0				222	444	889	1389	2778
	2	3.7				300	601	1201	1877	3754
	1	2.4				463	926	1852	2894	5787
360x288	9	10.5			53	106	212	423	661	1323
(CIF)	8	8.5			62	123	247	494	772	1543
	7	7.2			82	163	327	654	1021	2042
	6	5.7			103	206	412	823	1286	2572
	5	5.0			121	242	483	966	1510	3019
	4	4.0			150	300	601	1201	1877	3754
	3	2.8			222	444	889	1778	2778	5556
	2	2.2			292	585	1170	2339	3655	7310
	1	1.4			463	926	1852	3704	5787	11574

* Average Picture Size is estimated based on typical camera scene, and averaged by H.264 I/P/P frames.

Appendix G- Specifications

System	O.S.	Embedded Linux 2.6
	Multiplex	Hexaplex operation - simultaneous record, live, playback, backup, control, & remote access
	Certification	FCC, CE,LVD
Video	Format	NTSC or PAL
	Input	4-CH, BNC, 1Vp-p/75ohm
	Main monitor	BNC x 1, 1Vp-p/75ohm VGA D-SUB 15-pin connector
	3-D de-interlace & de-noise	**Yes**
	Loss detection	Yes
	Motion detection	Yes, with configurable detection area & sensitivity
Audio	Input	2 RCA-jack connector, line-in level (100mV-2Vrms)
	Output	1 RCA-jack connector, line-out level (up to 2Vrms)
Record	Compression	Video: **H.264** Audio: ADPCM
	Frame rate (IPS) & Resolution	**NTSC – 60 / 720*480, 120 / 720*240, 240 / 360*240** **PAL – 50 / 720*576, 100 / 720*288, 200 / 360*288**
	Mode	Manual/Schedule/Alarm/Motion
	Pre-record time	0 - 10 seconds
	Post-record time	0 - 60 minutes
Display	Resolution	NTSC – 720*480, PAL – 720*576
	Split windows	1/4
	Frame rate	Up to 30 (NTSC) / 25 (PAL) IPS per display window
	Freeze	Yes
	Sequential switch	User adjustable
	Digital Zoom	X2, X4
Playback	Frame rate (IPS) & Resolution	NTSC – 60 / 720*480, 120 / 720*240, 240 / 360*240 PAL – 50 / 720*576, 100 / 720*288, 200 / 360*288

	Search	**Smart search**, Date/time, Camera, Alarm, Motion, & Video Loss
	Operation	Remote playback from IE
Storage	HDD	1 set of 3.5” SATA type HDD, **> 2TB of HDD storage size,** **Advanced format HDD supported**
	Partitions	Configurable alarm partition size Configurable auto-overwrite or not
	Backup	1 USB 2.0 ports for USB 2.0 disc drives, DVD+RW, **DVD+R, DVD-R**, card readers, HDD, etc. **Self playback for backup files**
Alarm	Input	4 contact or TTL/CMOS signal, polarity selectable
	Output	1 Normally Open or 1 Normally Closed relay output
	Buzzer	Yes
	Triggered by	Sensor input, Video loss, & Motion
	Event log	Yes
Network	Ethernet	1 RJ-45 10/100BaseT Ethernet connector
	Web	Remote setup, monitoring, backup, alarm notification, & **remote software upgrade** **1 I.E./Firefox for multiple DVRs** **Configurable HTTP/e-mail/FTP/Control/Data port**
	E-mail	Alarm notification to stationary or mobile devices
	FTP	Alarm video/audio file storage
	Video	1/4 split-window & SEQ mode for I.E.
	Audio	Bidirectional
	Protocol	TCP/IP, HTTP, PPPoE, DHCP, DDNS, FTP, TSP
	Remote users	Up to 6 users simultaneously
	Bandwidth	TCP/IP type dynamic sliding window control
	Remote stations	PC, mobile phone, or PDA
Setup	Local	On screen setup via keypad, I/R remote controller, mouse, and/or RS-485 keyboard controller
	Remote	Setup & upload via Windows application software
	Multi-lingual	Yes

Reliability	System recovery	Auto power on after power loss recovery
	Watch Dog Timer	Yes
	Timer	Built-in real time clock
	Security	Multi-level password (3 levels, up to 18 accounts) protection with authentication key for remote access
Weights & Measures	Dimension Weight	320(W) x 210(D) x 50(H)mm 2.0 KG (without HDD)
Power	Source	+12 VDC
	Consumption	30W Max.
Operating Temperature		0°C ~ +45°C

Appendix H-compatible device table

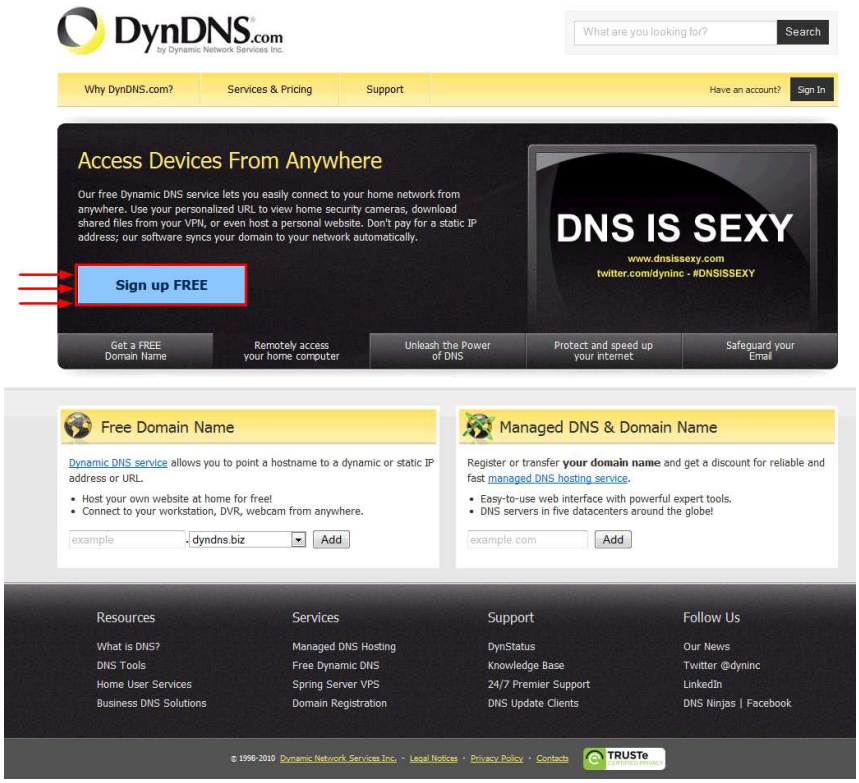
U.S.B **2.0 Devices** compatible table	
USB-Storage Enclosures 5.25”	
Brand	**Capacity**
Macpower’s Alumni Prefect USB 2.0 - **PF-U2MS**	**—**
USB-Disc Storage	
Brand	**Capacity**
Transcend’s JetFlash 150/V60 Series, JetFlash V33	**8GB**
Apacer’s Handy Steno AH220	**—**
Pretec’s i-Disc Wave (Black)	**512M**
Kingston’s DataTraveler USB Flash Driver(DTI/512FE)	**512M**
Kingston’s DataTraveler DT100	**8GB**
SanDisc’s Cruzer micro USB Flash Driver	**—**
Sandisc’s Cruzer Titanium	**4GB**
Sandisc’s Cruzer Contour	**4GB**
Sony’s MICRO VAULT Classic Series	**—**
OCZ’s ATV, Rally2	**4GB**

DVD WRITER compatible table	
Brand	**Velocity**
Asus DRW-1608P Series	

Pioneer DVR-A11, DVR-X152 Series	
BenQ EW200G Series	
LITEON LightScribe DVD Writer SHM-165H6S, DVD Writer DX-20A4P	**20X**
Sony DVD/CD Rewritable Drive Model DRX-810UL Series	**—**
NEC DVD/CD Rewritable Drive Model ND-4550A Series	**—**
HP dvd9404e External Super Multi DVD Writer Series	**18X**
Single side ,single player disc(DVD)	
Brand	**Velocity**
Infomedia DVD+R	**16X**
Mitsubishi DVD+RW	**1-4X**
Philips DVD+RW	**1-4X**
Ritek DVD-R 8X, DVD+RW 1-4X	**—**
Verbatim DVD+RW	**1-4X**

Appendix I- Applying free DDNS Host from internet

1. Please go to http://www.dyndns.com and click "Sign up free"


DynDNS.com
What are you looking for?
Search
Why DynDNS.com?
Services & Pricing
Support
Have an account?
Sign In
Access Devices From Anywhere
Our free Dynamic DNS service lets you easily connect to your home network from anywhere. Use your personalized URL to view home security cameras, download shared files from your VPN, or even host a personal website. Don't pay for a static IP address; our software syncs your domain to your network automatically.
Sign up FREE
DNS IS SEXY
www.dnsissexy.com
twitter.com/dyninc - #DNSISSEXY
Get a FREE Domain Name
Remotely access your home computer
Unleash the Power of DNS
Protect and speed up your internet
Safeguard your Email
Free Domain Name
Dynamic DNS service allows you to point a hostname to a dynamic or static IP address or URL.
Host your own website at home for free!
Connect to your workstation, DVR, webcam from anywhere.
example
dyndns.biz
Add
Managed DNS & Domain Name
Register or transfer your domain name and get a discount for reliable and fast managed DNS hosting service.
Easy-to-use web interface with powerful expert tools.
DNS servers in five datacenters around the globe!
example.com
Add
Resources
What is DNS?
DNS Tools
Home User Services
Business DNS Solutions
Services
Managed DNS Hosting
Free Dynamic DNS
Spring Server VPS
Domain Registration
Support
DynStatus
Knowledge Base
24/7 Premier Support
DNS Update Clients
Follow Us
Our News
Twitter @dyninc
LinkedIn
DNS Ninjas | Facebook
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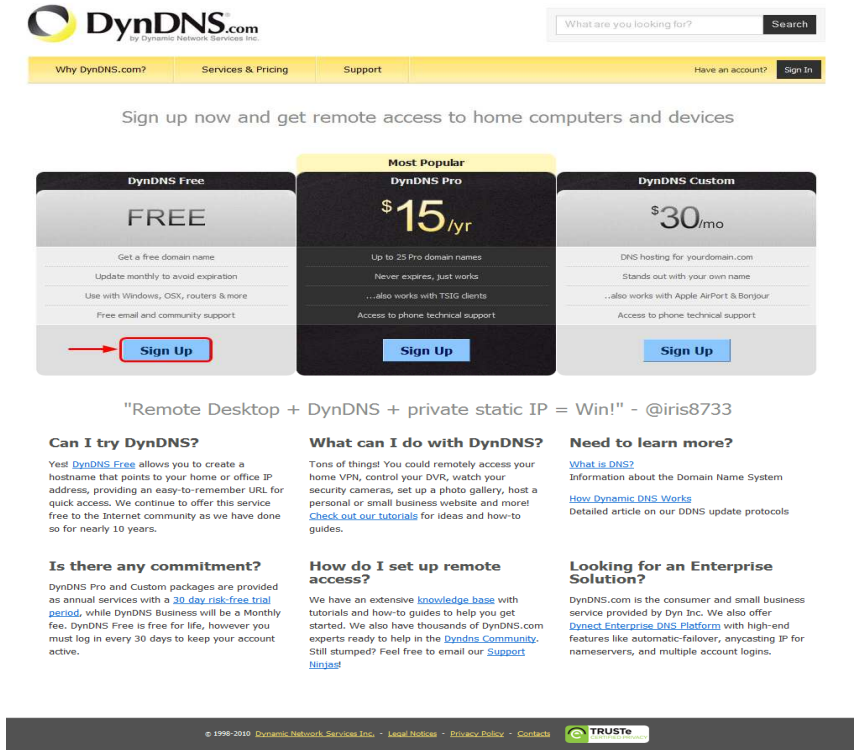
TRUSTe

2. Choose free sign up


DynDNS.com
What are you looking for?
Search
Why DynDNS.com?
Services & Pricing
Support
Have an account?
Sign In
Sign up now and get remote access to home computers and devices
Most Popular
DynDNS Free
FREE
Get a free domain name
Update monthly to avoid expiration
Use with Windows, OSX, routers & more
Free email and community support
Sign Up
DynDNS Pro
$15/yr
Up to 25 Pro domain names
Never expires, just works
...also works with TSIG clients
Access to phone technical support
Sign Up
DynDNS Custom
$30/mo
DNS hosting for yourdomain.com
Stands out with your own name
..also works with Apple AirPort & Bonjour
Access to phone technical support
Sign Up
"Remote Desktop + DynDNS + private static IP = Win!" - @iris8733
Can I try DynDNS?
Yes! DynDNS Free allows you to create a hostname that points to your home or office IP address, providing an easy-to-remember URL for quick access. We continue to offer this service free to the Internet community as we have done so for nearly 10 years.
What can I do with DynDNS?
Tons of things! You could remotely access your home VPN, control your DVR, watch your security cameras, set up a photo gallery, host a personal or small business website and more! Check out our tutorials for ideas and how-to guides.
Need to learn more?
What is DNS?
Information about the Domain Name System
How Dynamic DNS Works
Detailed article on our DDNS update protocols
Is there any commitment?
DynDNS Pro and Custom packages are provided as annual services with a 30 day risk-free trial period, while DynDNS Business will be a Monthly fee. DynDNS Free is free for life, however you must log in every 30 days to keep your account active.
How do I set up remote access?
We have an extensive knowledge base with tutorials and how-to guides to help you get started. We also have thousands of DynDNS.com experts ready to help in the Dyndns Community. Still stumped? Feel free to email our Support Ninjas!
Looking for an Enterprise Solution?
DynDNS.com is the consumer and small business service provided by Dyn Inc. We also offer Dynect Enterprise DNS Platform with high-end features like automatic-failover, anycasting IP for nameservers, and multiple account logins.
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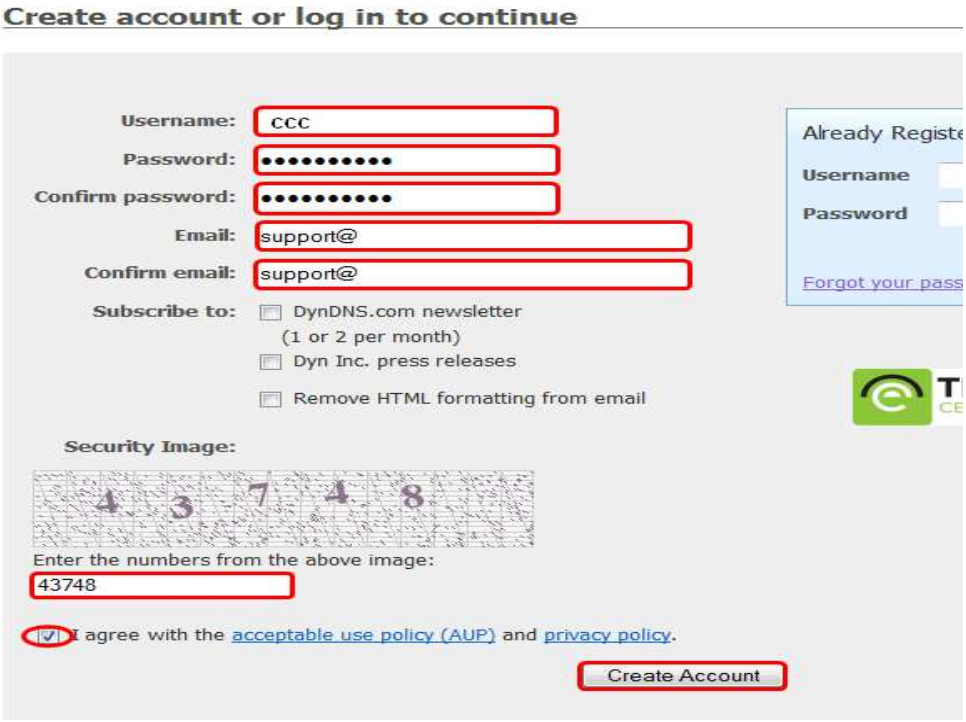
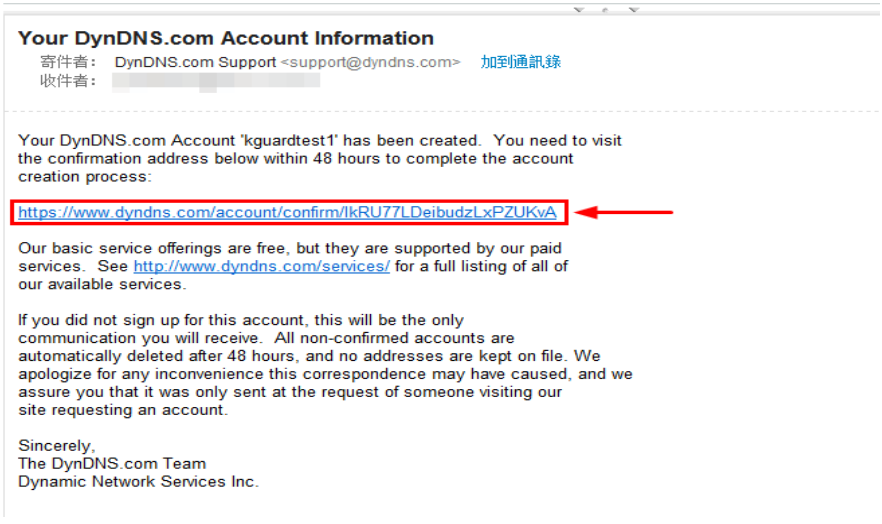
TRUSTe

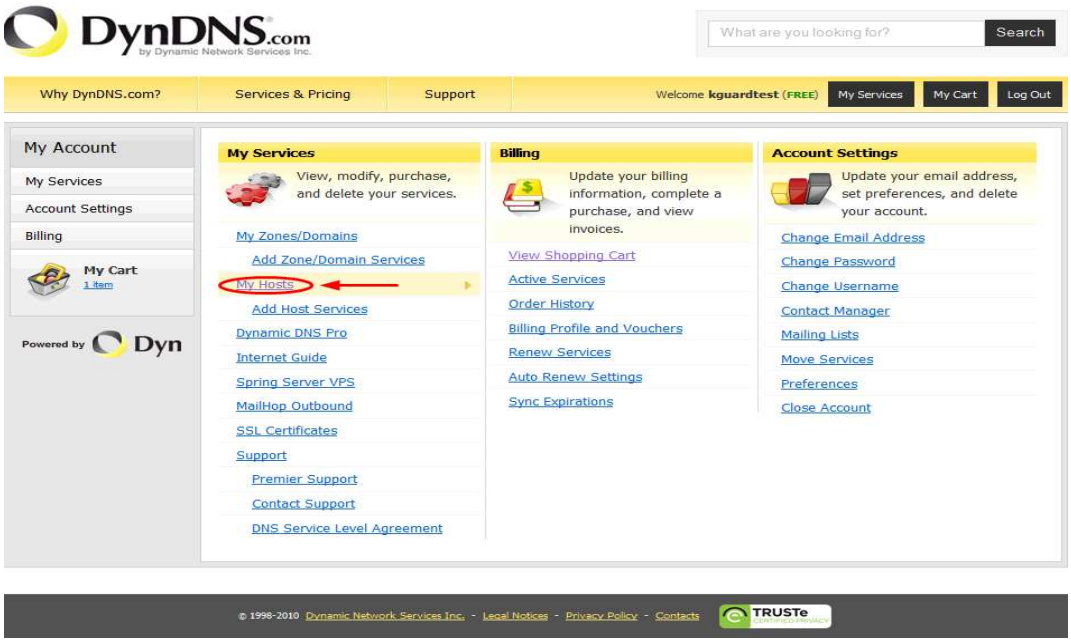
3. Create your own username, password, E-mail and enter the image numbers to create an account



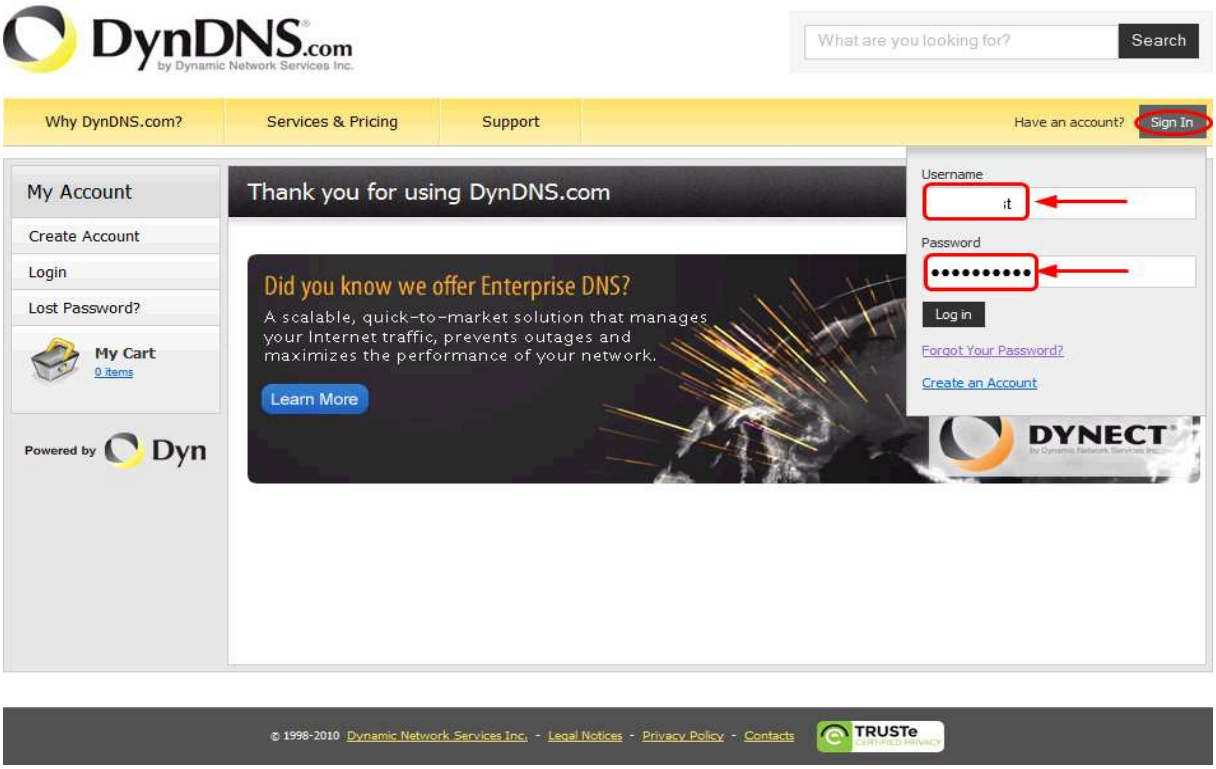
4. After you created your account, the company will sent an e-mail to verify your e-mail account
5. Check your e-mail and see if you have received an e-mail from DynDNS. Click on the link in the e-mail to complete the verification.


Your DynDNS.com Account Information
寄件者： DynDNS.com Support <support@dyndns.com> 加到通訊錄
收件者：
Your DynDNS.com Account 'kguardtest1' has been created. You need to visit the confirmation address below within 48 hours to complete the account creation process:
https://www.dyndns.com/account/confirm/IkRU77LDeibudzLxPZUKvA
Our basic service offerings are free, but they are supported by our paid services. See http://www.dyndns.com/services/ for a full listing of all of our available services.
If you did not sign up for this account, this will be the only communication you will receive. All non-confirmed accounts are automatically deleted after 48 hours, and no addresses are kept on file. We apologize for any inconvenience this correspondence may have caused, and we assure you that it was only sent at the request of someone visiting our site requesting an account.
Sincerely,
The DynDNS.com Team
Dynamic Network Services Inc.

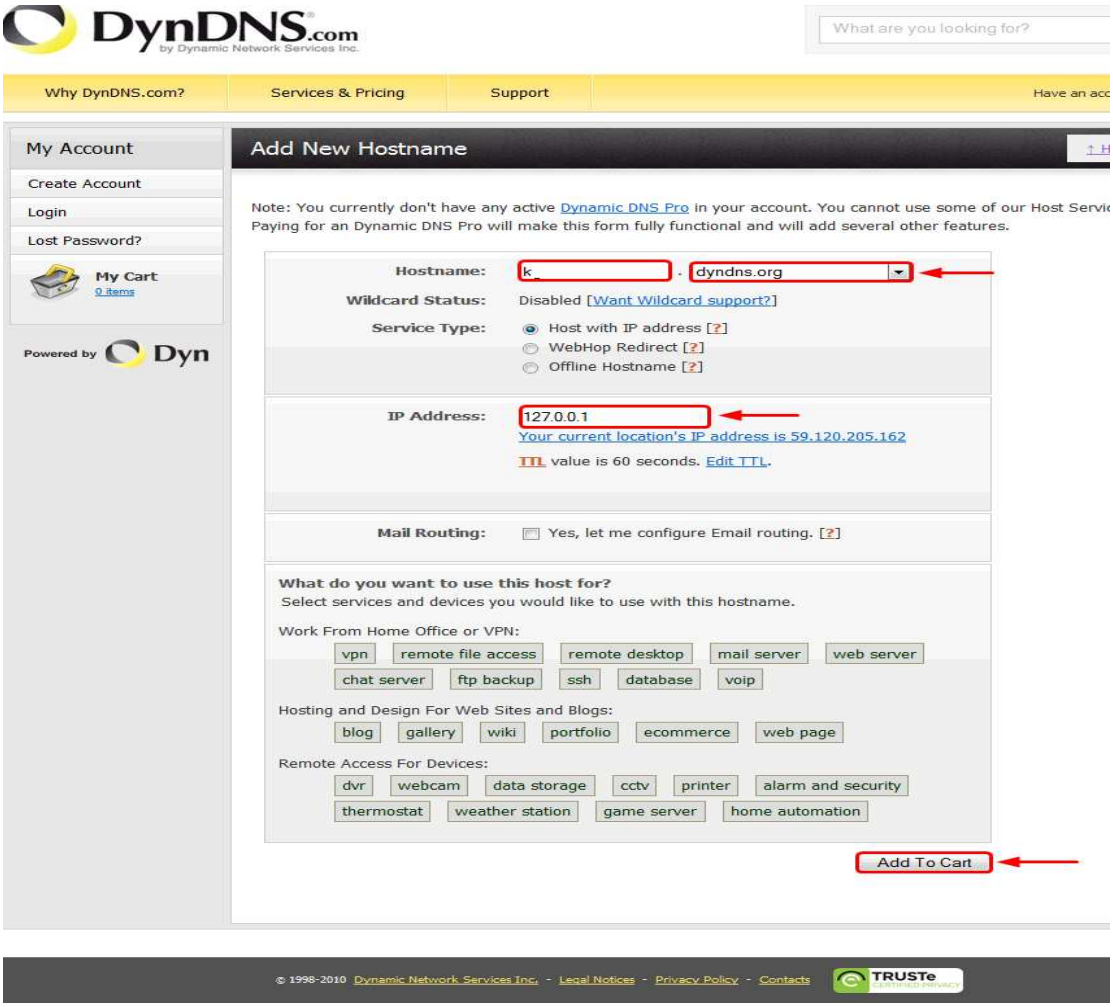
6. Now, go to http://www.dyndns.com and log in your username and password



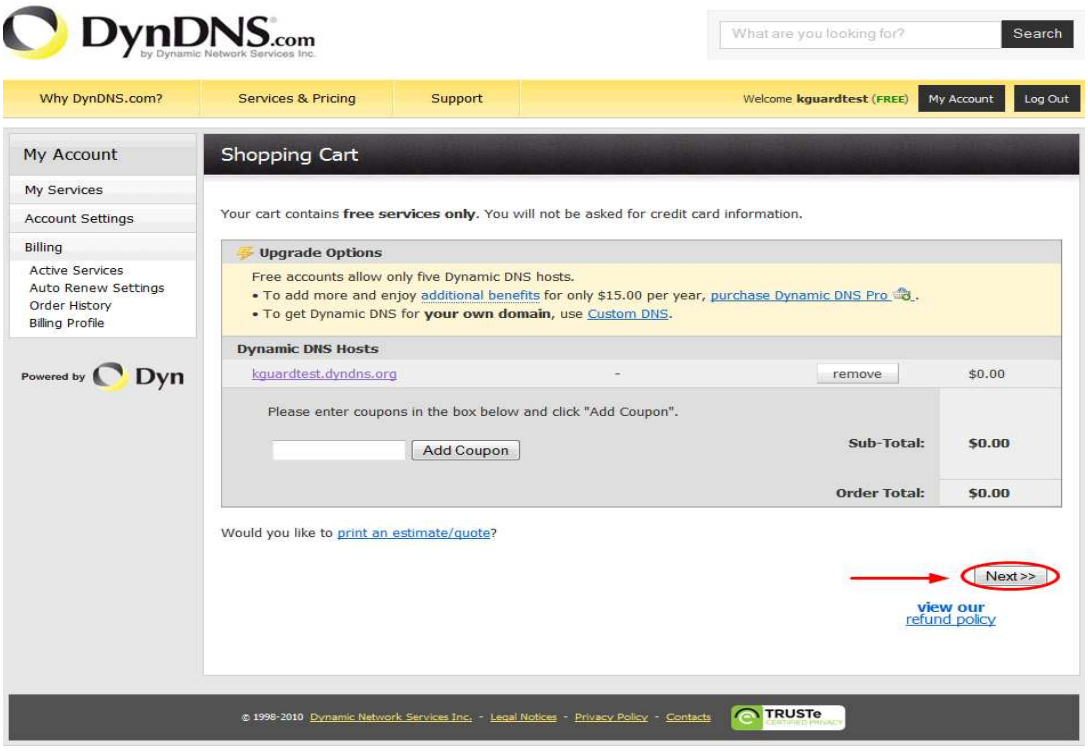
7. Go to **"My Hosts"**



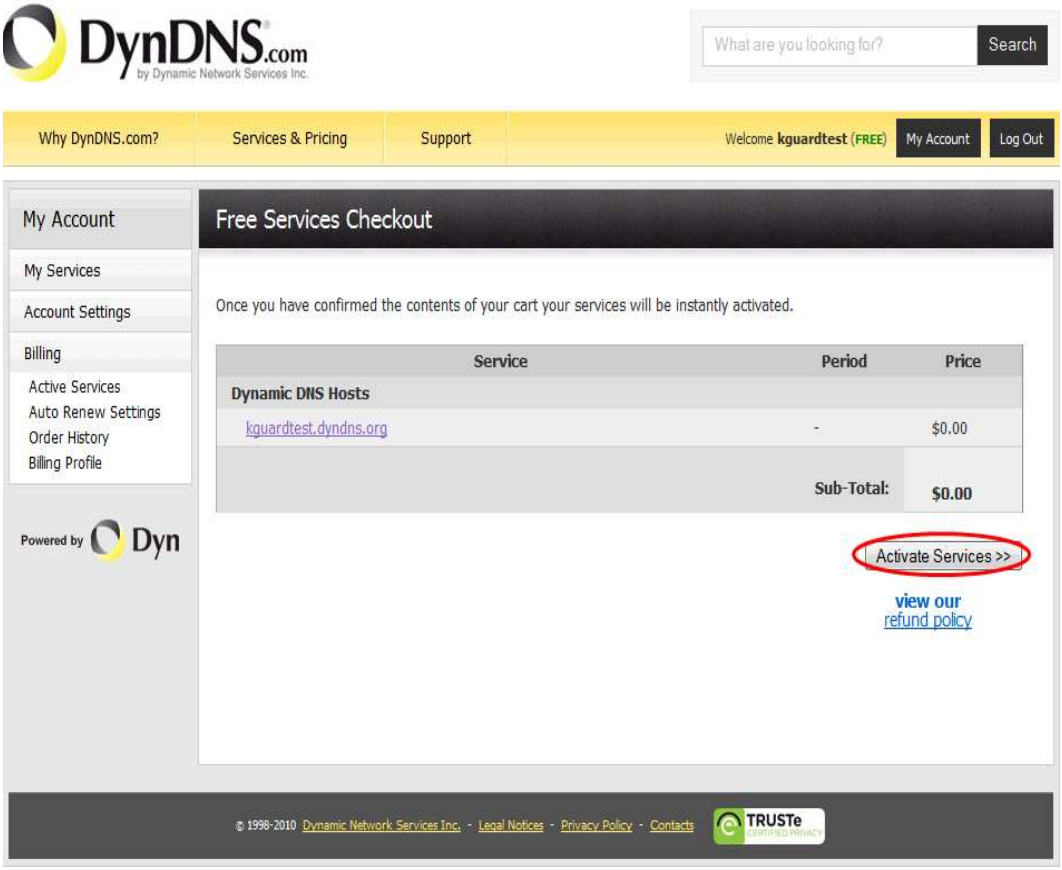
7. key-in your hostname, IP address and click **"add to cart"**.



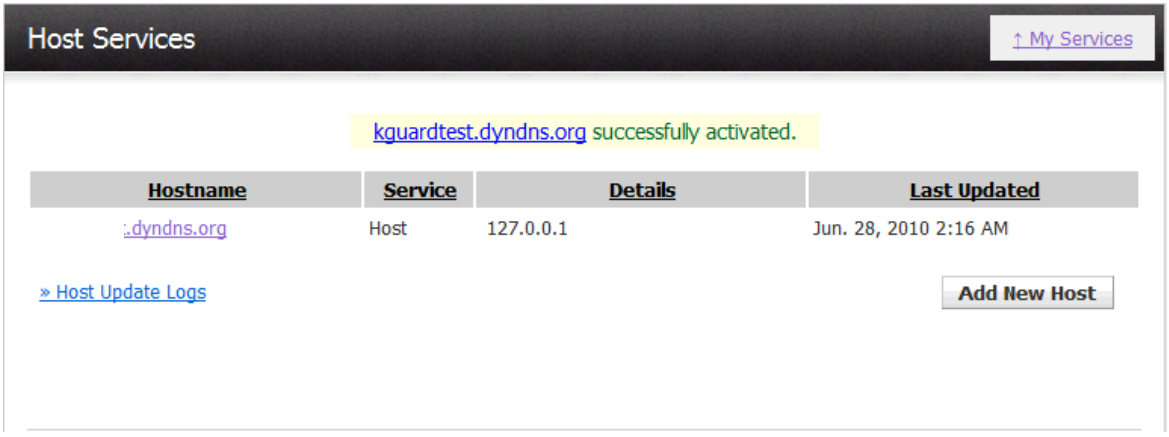
8. Click **"Next"** button.



9. Click **"Activate Services"**

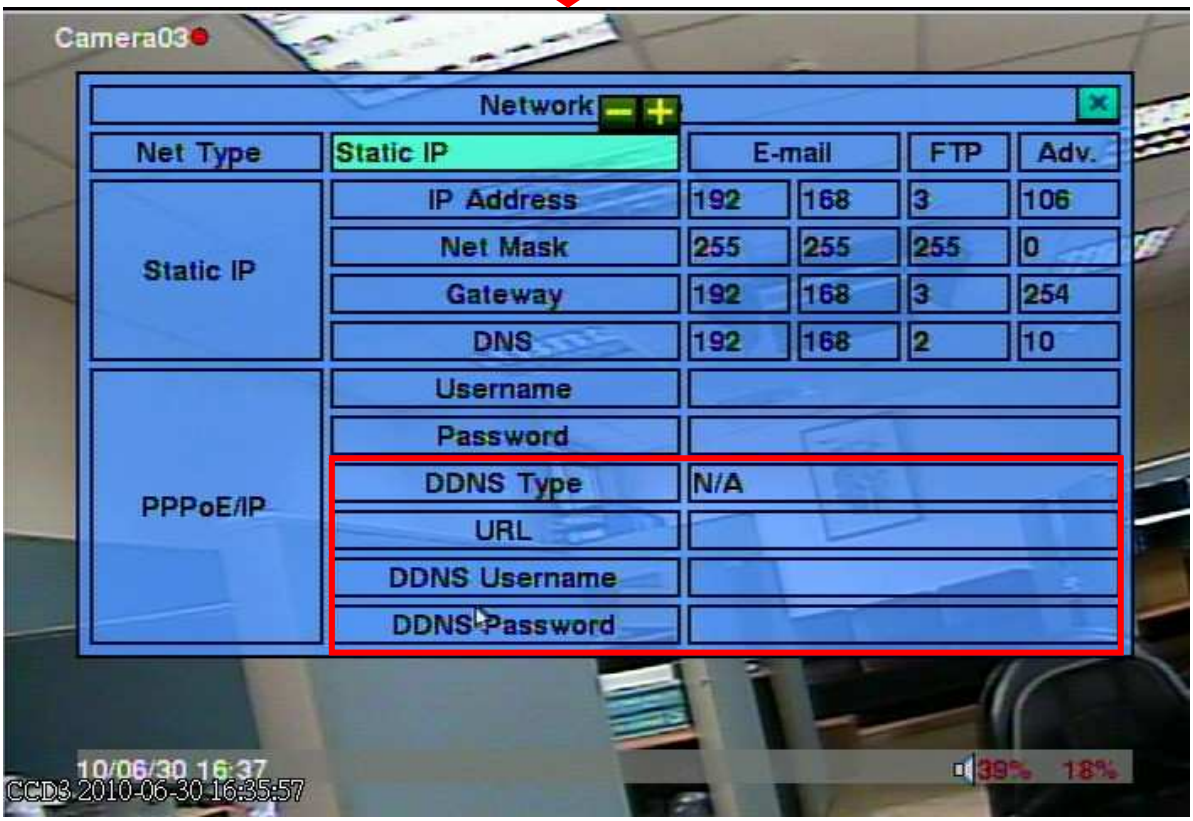


10. When activation is successful, the webpage will display the message:



11. Click on **"Network"** icon.

Setup Page



12. Choose the **DDNS Type**
13. fill out the **URL**(you just applied)
14. fill out the **DDNS Username**(you just applied)
15. fill out the **DDNS Password**(you just applied)
16. Confirm the settings.

The document will be revised without notice.